

CLEFT SENTENCES IN HAUSA?

A Syntactic Study of Focus

Thesis

submitted for the Ph.D. degree

by

PATRICK McCONVELL

School of Oriental and African Studies

University of London

July 1973



ProQuest Number: 10731569

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



ProQuest 10731569

Published by ProQuest LLC (2017). Copyright of the Dissertation is held by the Author.

All rights reserved.

This work is protected against unauthorized copying under Title 17, United States Code
Microform Edition © ProQuest LLC.

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 – 1346

ABSTRACT

This thesis sets out to analyse a type of emphatic sentence in Hausa using the theory of transformational-generative grammar. These sentences, which are called focus-emphatic here, are, it is argued, derived by the movement of a constituent into a left-hand position. In such sentences the moved constituent has the thematic property focus.

Part I discusses the nature of focus-emphasis and the types of analysis which have been proposed to account for it in Hausa, and in English and certain other languages. In Part II a particular type of analysis in which the focus emphatic sentence is regarded as a type of cleft sentence, and derived from a pseudo-cleft deep structure, is tested for Hausa and rejected on the basis of the patterns of agreement, of pronominalization and of the behaviour of relative clauses. In Part III two alternative analyses in which the non-emphatic sentence forms part of the deep structure of focus-emphatic sentences are compared: focus-fronting, by which the focus constituent is simply moved to the left, and focus-raising which retains the view that such sentences in Hausa are a type of cleft sentence derived from a pseudo-cleft structure, but proposes in addition a more remote deep structure. It is concluded that focus-raising is preferable, and as a result that some semantic interpretation rules must apply at intermediate as well as deep structure. In the Appendices the rules necessary for this derivation are listed.

ACKNOWLEDGEMENTS.

I should like to thank the members of the African Department of the School of Oriental and African Studies who taught me Hausa grammar, especially Mr.F.W.Parsons and Prof.D.W.Arnett, M. Adamu Misau who acted as my informant while I was beginning this thesis and Dr. N.V. Smith, now of University College, London for his advice on matters of linguistic theory. I am indebted to Ahmadu Bello University for allowing me to spend a year attached to the Centre for the Study of Nigerian languages, at Abdullahi Bayero College, Kano as a Research Associate. My thanks go also to my liaison officer Dr.Kabiru Galadanci, the staff of the Centre, M.Ada'u Isa Rano, the members of Yakasai Students' Union, especially M.Adamu Mohammed and M. Aminu Tafida, and the people of Rimi Market, for their help and patience in answering my questions about Hausa.

CONTENTS

Abstract

Acknowledgements

PART I

<u>Chapter 1</u>	<u>INTRODUCTION</u>	
1.1.	Introductory.	7
1.2.	The Types of Sentence under Consideration	8
1.3.	The Theory	12
1.4.	The Semantics of Focus	17
1.5.	Other Types of Emphasis	22
1.6.	Special Questions as Focus Emphatic Sentences	27
<u>Chapter 2</u>	<u>ANALYSES OF FOCUS EMPHASIS</u>	
2.1.	The Types of Analysis under Consideration	29
2.2.	Static Order Analyses I: Welmers (1964)	33
2.3.	Static Order Analyses II: Awobuluyi (1971)	35
2.4.	General Criticism of Static Order Analyses	39
2.5.	Focus-Fronting: Schachter (1966)	41
2.6.	An Extension of Focus-fronting	48
2.7.	Pseudo-cleft Analyses I: Akmajian (1971)	54
2.8.	Pseudo-cleft Analyses II: Bagari (1970)	59
2.9.	Focus-raising I: Chomsky (1970)	63
2.10	Focus-raising II: Emonds (1969)	66
2.11	Focus-raising applied to Hausa	68
2.12	The Argument	75

PART II

<u>Chapter 3</u>	<u>AGREEMENT</u>	
3.1.	Patterns of Agreement	78
3.2.	Agreement and Case-marking in Cleft Sentences in English.	79
3.3.	Reflexive Pronouns in Cleft Sentences in English	81
3.4.	Agreement in Focus-emphatic Sentences in Hausa	84
3.5.	Reflexive Pronouns in Focus-emphatic Sentences in Hausa	85
3.6.	Non-reflexive Pronouns	87
3.7.	Agreement of the Copula in Focus-emphatic Sentences NP foci	88
3.8.	Apparent irregularities in Agreement with Adverbials	89
3.9.	The Problem of the Agreement of Verbal Nouns	91
3.10	A Solution in terms of Focus-raising	94

<u>Chapter 4.</u>	<u>EXTRAPOSITION OF RELATIVE CLAUSES</u>	
4.1	Cleft and Complement Extraposition	103
4.2	Relative Clause Extraposition	106
4.3.	Extrapolated Relative Clauses and Right-hand Topics	109
4.4.	Restrictions on RELATIVE CLAUSE EXTRAPOSITION	110
4.5.	RELATIVE CLAUSE EXTRAPOSITION and CONJUNCT MOVEMENT	112
4.6.	RELATIVE CLAUSE EXTRAPOSITION and RIGHT SHUFFLE	115
4.7	RELATIVE CLAUSE EXTRAPOSITION in Focus-emphatic Sentences	120
4.8	An Explanation using Focus-placement	124

<u>Chapter 5.</u>	<u>PRONOMINALIZATION AND REFLEXIVIZATION</u>	
5.1	The Status of Pronouns and Reflexives	130
5.2.	"Backward" Pronominalization with Nominalizations	132
5.3	EQUI-NP DELETION and the cyclicity of PRONOMINALIZATION	134
5.4	"Copying" NOMINALIZATION	139
5.5.	"Backward" Reflexivization in Nominalizations	144
5.6	"Backward" Pronominalization in Focus-emphatic Sentences	144
5.7	The Advantages of Focus-raising	149
5.8	"Backward" Reflexivization in Focus-emphatic Sentences	152
5.9	Emphatic Copular Sentences	153
5.10	A Proposed Cross-over Constraint	155
5.11	Summary of Part II	156

PART III

<u>Chapter 6</u>	<u>FOCUS-RAISING AND RELATIVE FORMATION</u>	
6.1	Focus-raising and Focus-fronting	158
6.2.	Ungrammatical/ Forward Pronominalization in Focus-emphatic Sentences	159
6.3.	Forward Pronominalization from the Focus	163
6.4.	RELATIVE FORMATION in Headless Relative Clauses	164
6.5.	Indirect Questions	165
6.6	"Indirect Question" Relative Clause	169
6.7	Pied-Piping in IQ Relative Clauses	173
6.8	IQ Relative Clauses in Negative Existential Sentences	178
6.9	Conclusion.	187

<u>Chapter 7.</u>	<u>RELATIVIZATION</u>	
7.1	Relative Clauses and Focus-emphatic Clauses	188
7.2	The Rules for Forming Relative Clauses	189
7.3	Restrictions on the Modal Properties of the Clause.	192
7.4.	Subjunctive and Imperative	193
7.5	Copular Sentences	195
7.6.	The Relative Perfect	199
7.7	Restrictions on Sentence Focus	200
7.8.	"Catenative" Constructions	201
7.9	"Catenative" Structure and the Conditions on the Relative Aux Change	207
7.10	Relative Anaphora	208
7.11	Cases in which RELATIVE DELETION does not apply	212
7.12	Non-application of RELATIVE DELETION resulting from the Prior Application of PRONOMINALIZATION	215
7.13	Cases in which RELATIVE DELETION applies	219
7.14	Deletion of Subject NP's	223
7.15	The Conditions on RELATIVE DELETION	231
7.16.	Relativization and Focus-raising.	232
<u>Chapter 8</u>	<u>CLEFT EXTRAPOSITION, COMP-DELETION and COP-DELETION</u>	
8.1	CLEFT EXTRAPOSITION	235
8.2	COMP-DELETION	238
8.3	COPULA DELETION	241
8.4	Restrictions on S-focus Sentences	243
8.5	Polar Conjunction.	245
8.6.	Negation in Focus-emphatic Sentences	247
8.7.	KOO-words in Negative Contexts	249
8.8	The Indefinite Specifier in Negative Contexts	256
8.9	Some Other Instances of Copula Deletion	257
8.10	Copula Deletion with Adverbial Nouns of Compulsion.	260
<u>Chapter 9</u>	<u>CONCLUSION</u>	
9.1	The Case for Focus-placement	263
9.2	Semantic Interpretation in the Focus-raising and Focus-fronting Analyses	265
9.3	An Assessment of Focus-raising and Focus-fronting	270
<u>APPENDIX I</u>	<u>PHRASE-STRUCTURE RULES</u>	274
<u>APPENDIX II</u>	<u>TRANSFORMATIONAL RULES</u>	296
List of works referred to		312

1.1 Introductory

The aim of this thesis is to investigate a certain type of sentence in Hausa using the theory of transformational-generative grammar. This type of sentence, which I call focus-emphatic, shares a number of features with cleft sentences in English and other European languages on the one hand, and with a type of sentence frequently encountered in West African languages and usually known as "emphatic", on the other. It is my task here to discover to what extent these focus-emphatic sentences in Hausa can be derived in the same way as cleft sentences in English. The results of this investigation should then help towards a decision as to which of the current analyses of cleft sentences is the most generally applicable to languages other than English, and this may in turn assist in the analysis of "emphatic" constructions in other West African languages. The derivations proposed also raise issues of general theoretical interest, particularly about the place of semantic interpretation in the grammar. In the course of argumentation, I also cover quite a large area of Hausa syntax not hitherto dealt with in transformational terms.

I shall not set out in detail all the data relevant to the syntax of focus-emphasis in Hausa, but shall concentrate on those aspects which form part of my argument. Some details of sentence-types and morphology are to be found in Appendix I. The orthography is the one now generally used in academic works on Hausa. I have marked tone only where its omission might cause ambiguity. Where the vowel is long, its tone is that of the first vowel unless otherwise marked.

In this introductory chapter I wish firstly to present in simple terms the type of sentence with which I am concerned, together with the terminology which I shall use in describing it, and the main criteria which any derivation of such sentences must satisfy. Then I will outline the theoretical standpoint from which the thesis is written, and discuss the modifications which may be necessary because of the nature of the data. Thirdly, the semantics of focus-emphasis, and how it can be linked to syntax, will be briefly discussed.

Finally, other types of emphasis are compared with focus-emphasis, to ascertain to what extent the same type of treatment could be applied to them. This is followed in the second chapter by an exposition of the current analyses of cleft and emphatic sentences, which provides the framework for the rest of the thesis.

1.2. The Types of Sentence under Consideration.

The main theme of this thesis is the analysis of sentences of the following form:

- (a) an element X which may be nominal, adverbial or verbal followed by a clause in which the first Auxiliary exhibits "relative" forms.¹
- (b) a type of sentence identical to (a) except that nee or cee occupies the position between X and the clause².

1. Hausa has two tense-systems in the Auxiliary, general and relative, the latter so called because its main use is within relative clauses. For a list of these forms, see Appendix 1^{§ 280} for a refinement of this formulation, see Chapter 7, Section 9.

2. nee/cee is the copula which normally follows the predicate NP or adjective. nee is the form agreeing with masculine singular, or plural NP's; cee is the form agreeing with feminine singular NP's. Agreement is normally with the first NP in the copular S, whether subject or predicate; but see also Chapter 3, sections 8 and 9.

This type of sentence is what I call a verbal focus-emphatic S. Verbal because the clause contains an Auxiliary and a Verb, as opposed to a copular S³. Focus-emphatic because such sentences are generally recognized as having an "emphatic" quality, by which the element X is "emphasized". Since Parsons has identified three types of emphasis, of which the type above is (b)-type, it is best to designate the element X further as the focus (for reasons which will be made clear) so as to distinguish this from other types of emphasis: hence the name focus-emphatic S.

[e] The surface syntactic structure of such focus-emphatic sentences is quite different from that of the normal, non-emphatic sentence of the form NP VP, i.e. subject - verb - (object(s)). The two sentence-types, with or without nee/cee, share the same semantic relation to the non-emphatic sentence containing the same lexical items e.g. the focus-emphatic sentences (1) and (2) in some sense express the same meaning as the non-emphatic (3), but the information is differently organized, with emphasis on the focus NP kwai - eggs

- | | | |
|-----|---|---|
| (1) | kwai suka sayaa
eggs they (relative-perfect) buy | } i.e. "it was eggs
they bought" or "they
bought "eggs" 4 |
| (2) | kwai nee suka sayaa
eggs be they(rel.perf.) buy | |
| (3) | sun sayi kwai
they (general past) buy eggs. | i.e. they bought eggs |

3. Verbal S here is used to include existential S with the existential predicates da, akwai, baabu or baa preceding an NP.

4. The symbol " " here indicates pronounced stress. Emphatic stress and focalization in cleft sentences in English, are taken to be at least approximately equivalent in meaning. Whether sentences with focus-emphatic stress can be derived transformationally from pseudo-cleft sentences, as suggested by Postal (1971) or focus is determined by semantic interpretation rules operating on stress in surface structure, as Chomsky proposes (1972) is a question which lies outside the scope of this enquiry, for stress plays no part in focus-emphasis in Hausa.

Corresponds to

Here the focus-NP of (1) and (2) ~~the~~ the direct object in (3), but the syntactic relation between the emphatic and non-emphatic sentence type need not be of this kind: the focus could be equated with the subject NP, oblique object, an NP within an embedded sentence; or it may not be an NP, but a PP, VP, V etc. (for full details see Appendix I). The focus element retains the function (in this example direct object of the highest verb) which it has in the non-emphatic S, but to this grammatical function which is definable in terms of the non-emphatic S is added a further, different kind of thematic function, that of focus, which is defined by its leftmost position preceding the clause.

Chomsky (1965) has stated that grammatical functions such as subject, object, etc., are to be defined in terms of deep structure configurations generated by phrase-structure rules. The primary task of a grammarian examining sentences like (1) and (2) is to relate them to non-emphatic sentences like (3), thereby defining the grammatical as well as the thematic function of the focus element. If Chomsky is right, the simplest way of relating these sentences is to generate non-emphatic sentences as deep structures and to relate focus-emphatic sentences transformationally to such deep structures as will adequately define the grammatical function of the focus in terms of the configurations of non-emphatic sentences.

Further, sentence-types (a) and (b) have the same meaning, and the same focus-emphatic thematic structure. The grammarian must therefore relate these two in such a way that their synonymy is a

consequence of their relation, within the theory e.g. in our case, by a transformational rule.

There is a third sentence type which, although different in form from (a) and (b) shares the characteristic of a leftmost NP which has the thematic property of focus. This type has the form (c), and is referred to in this thesis as emphatic or inverted copular S.

(c) NP or Adjective - nee/cee - NP

Just as verbal focus-emphatic S can be related to verbal non-emphatic S, so emphatic copular S like (4) can be related to non-emphatic copular S like (5).

(4) kwai nee abincinsu
eggs be their food i.e. "it is eggs which is their food"
or "their food is || eggs"

(5) abincinsu kwai nee
their food eggs be i.e. their food is eggs.

The semantic relation between (4) and (5) is the same as that between (1) or (2) and (3), and this should be expressed by linking the two sets of sentences in the same way in the grammar, if possible. In this case, however, unlike with verbal sentences, I will argue that the grammatical function of the focus NP in such sentences as (4) is uniquely definable as equated with the predicate NP in its non-emphatic counterpart.

The fourth type of sentence which will be considered here is, I argue, also of the focus emphatic type, but this is not as obvious as with the preceding types. It consists of

(d) a normal verbal S with general tenses in the Auxiliary, followed by nee.

This I call an S-focus or S-emphatic S, as it seems that here it is the whole of the sentence which is the emphasized focus, not any part of it as in the previous cases. e.g.

- (6) sun sayi kwai nee
 they (general perfect)-buy eggs be. i.e. "it is a fact/it
 is the case that they
 bought eggs"

Later it is shown that this type of sentence shares a number of syntactic characteristics with the focus-emphatic sentences (a) and (b), as well as their thematic properties. One must therefore attempt to relate these two types syntactically also.

Hence the tasks of the linguist confronted with these data are primarily to relate types (a) and (b) formally to non-emphatic sentences, and secondarily to relate types (a), (b), (c) and (d) formally together in the grammar.

1.3. The Theory

In order to relate these sentence types it is necessary to have a grammatical theory which is capable of formalizing these relations. The theory chosen here is that of transformational generative grammar, specifically that of Chomsky (1965). The essential conception of that work, that of syntactic deep structure generated by a base component, consisting of phrase-structure rules and a lexicon, (including the use of distinctive features to account for strict sub-categorization and selectional restrictions) is retained here, as is the use of transformational rules to specify series of mappings between deep and surface structure. These rules are regarded here as an ordered set, a sub-set of which may operate cyclically. Of other types of rule which have been suggested e.g. pre-cyclic, post-cyclic, and last-cyclic, only the latter is of any importance in this thesis.

I have made two modifications in the theory in writing this thesis. The first concerns the use of the dummy symbol Δ .
 In Chomsky's 1965 conception, Δ is generated by the phrase structure rules as a rewrite of all symbols which are not rewritten as grammatical markers. Δ ~~is then replaced by a lexical item whose features match the environment of Δ by the lexical insertion rule.~~
 However, Chomsky also allows that Δ may not be replaced by a lexical item, but simply deleted. The question is at what stage these dummies are deleted. In his 1965 formulation of the PASSIVE transformation, Δ is used to indicate the empty subject, so it can be inferred that Δ is not deleted at deep structure, but at some later stage. In later works, Chomsky allows Δ not only to be deleted, but to be replaced by items moved by transformation e.g. in his treatment of pseudo-clefts. (1970). It is this kind of extension of the function of Δ which I make use of here, both as a place-holder for positions which are to be filled by transformation (e.g. FOCUS-RAISING and possibly other types of raising) and as a rewrite of the head in "headless" relative clauses and complements. This latter obviates the need for the "expletive" it which is used more or less as a dummy by grammarians anyway, and for which there is little justification in Hausa. The reason for the use of Δ here is that the head node cannot be deleted at deep structure, since it figures in the structural descriptions of later rules, e.g. RELATIVE FORMATION. Deletion cannot take place at surface structure either, since for example when EXTRAPOSITION moves a complement S away from its dummy head, the head must then be deleted together with its dominating NP node before VERBAL SUFFIXING takes place, so that the verb does not take a form suitable to pre-NP

position. For practical purposes in this thesis, I have assumed that Δ is deleted as soon as EXTRAPOSITION takes place; it may be, though, that all Δ -deletion takes place at the same point in the derivation, somewhere between deep and surface structure⁵.

The second modification is one which flows from the conclusions of the thesis, rather than one which is assumed a priori: that is that deep structure is not the sole source of semantic interpretation. Since this view has become accepted by Chomsky and many other linguists, the best course is to bear it in mind as a possibility from the outset. Chomsky (1965) following Katz and Postal (1964) regarded deep structure as the sole input to the semantic component. All transformations which changed meaning in the preceding theory e.g. question, imperative were to be handled by generating optional abstract markers like Q and Imp in the phrase-structure which would yield appropriate readings and which would trigger obligatory transformations and subsequently be deleted.

This theory was extended to account for sentences which we are calling focus-emphatic here by generating a marker emph associated with other constituents in the base which triggered the

5. This conception of the role of Δ could be incorporated into Emonds' proposal of structure-preserving transformation (1969). Δ could be retained as a place-holder for empty nodes, which could be filled by such transformations, or deleted at the point at which this class of transformations has finished applying, after which the root (structure-distorting) transformations would apply. This is an ambitious programme which will not be attempted here, because it is difficult to decide which rules belong to which category, let alone to find out whether one category applies before the other without overlapping.

appropriate emphatic transformation e.g. frontshifting of the constituent with emph adjoined to it. The problem however was that emph could only be adjoined to one constituent in any sentence, since the emphasis transformation applies only once to an S. A similar problem was studied by Kuroda (1969): that of words like even in English which alter the meaning of sentences depending on which constituents they are associated with, but are extremely restricted as to the number of occurrences, in most dialects to only once per sentence, like emph. Kuroda's solution was to weaken the Katz-Postal hypothesis by setting up a special class of rules called attachment transformations which take certain elements (like even or emph) which are generated only once by the base as S-daughters, and attach them to constituents of S; thereby assigning them a particular scope in the semantic interpretation. This class of transformations was thus allowed to change meaning, but it was hoped that the kinds of change could be highly restricted. This is the position taken by Schachter (1966) on emphasis in English.

Following this, the idea of abstract markers which had no function but to trigger transformations itself came under attack. They were said to be ad hoc, i.e. they had not solved the problem of the level of semantic interpretation, merely papered it over. Consequently, attachment of such markers, conceived as a special class of rules, merely restricted the original problem in different terms, viz. the problem that the input of semantic interpretation must incorporate changes in scope etc. brought about by transformations. This critique has been further developed by the so-called interpretivist school (including Chomsky) towards the elaboration of concepts like surface structure semantic interpretation in addition to deep structure semantic interpretation.

As I noted in the preceding section, the focus-emphatic sentences with which I am dealing express the same "basic meaning" as the corresponding non-emphatic sentences, and it is only in the latter that grammatical functions can be read off from the structure in a simple way. But the focus-emphatic sentence contains an additional meaning of focus (the nature of which will be discussed in the next Section), which may be attached to many different constituents, but only to one in each S; hence it cannot be associated with the emphasized constituent in deep structure, since there is no way in which phrase-structure rules can be constrained so that they generate only strings with one occurrence of an element, when that element is an optional rewrite which occurs at several different places in the rules⁶. So there are some grounds for believing that focus-emphatic sentences may be derived from structures containing their non-emphatic counterparts, and therefore that semantic interpretation rules must apply after the emphatic rules so that the focus meaning can be assigned to the constituent which has become the focus. What this thesis aims to do is to provide syntactic evidence for such a derivation.

6. e.g. given either the rule (A) or a set of rules like (B)

(A) $S \longrightarrow NP\ (emph)\ VP\ (emph)\ (PP(emph))$

(B) $NP \longrightarrow NP\ (emph)$
 $VP \longrightarrow VP\ (emph)$
 $PP \longrightarrow PP\ (emph)$

there is no way in which only strings like NP + emph VP or NP VP + emph could be generated without also generating *NP + emph VP + emph or *NP + emph VP PP + emph. For the phrase-structure rules used in this thesis see Appendix I, and for the transformational rules see Appendix II.

1.4. The Semantics of Focus.

The focus-emphatic sentences (1), (2) and (4) in Section 2 are translated into English in Section 2 as either cleft sentences i.e. sentences of the form it - be - X - relative clause e.g. it was eggs that they bought or sentences of the normal form but with abnormal primary stress on the same element which is X in the cleft sentence, i.e. eggs in they bought // eggs. The element eggs is what I shall call the focus⁷. My claim therefore is that the semantic relation between this element and the rest of the sentence is the same as that between the focus and the clause in Hausa.

Focus can best at present be defined semantically in terms of its relation to presupposition as suggested by Chomsky (1972). The presupposition of sentences (1) and (2) or their English translations above is they bought something. In this it differs from (3) or its English gloss, they bought eggs which has no presupposition of that kind. What the focus-emphatic sentences then do, irrespective of their syntactic form, is to identify the something with the focus: eggs, or in other words, to give a value to the variable. This same point has been made by Halliday (1967) in his analysis of sentences in terms of their information structure: the presupposition is equivalent to the

7. There is an unfortunate lack of agreement about terminology in this area of (for want of a better word) thematic relations. The term focus seems now to be generally accepted in the sense in which I use it e.g. by Chomsky (1972) and Akmajian (1971).

given in his scheme, and the focus to the new⁸.

Chomsky has pointed out (1972) that the identity of the members of the syntactic pair focus-clause in a cleft sentence is not always the same as that of the semantic pair focus-presupposition in the same sentence. Thus in the sentence

- (7) it was the man with the blue coat that they were investigating

The syntactic focus is the man with the blue coat, but semantically the presupposition is they were investigating the man with some sort/colour of coat and the focus is semantically only the adjective blue, which of course cannot be the focus alone in a cleft sentence.

- (8) *it was blue that they were investigating the man with the coat

In (7) the semantic focus is marked by the stress on blue⁹.

In Hausa stress does not play the role of determining the focus as in English, so that in the focus-emphatic sentence equivalent to (7)

- (9) mutum mai shuudiyar riigaa (nee) su kee bincikeewaa
man with blue coat (be) they are investigating

8. This does not of course do justice to the complexity of Halliday's work in this field, which has much to offer transformational grammar. I am not alone in using the concept presupposition rather loosely. Its lack of rigour derives largely from its present position uncomfortably straddling logical and linguistic discourses. From the logical side it has been criticized for being indistinguishable from entailment (Wilson 1972), while on the linguistic side it forms part of a theory of non-logical discourse which is as yet inadequate.

9. As Chomsky also points out, stress does not uniquely determine focus either, as an emphatic stress may emphasize just the stressed word or a constituent of which it is part.

It is impossible to tell whether the semantic focus is the same as the syntactic focus, or only equivalent to some part of it, except by reference to the context of discourse or situation.

It is not immediately obvious that the focus-emphatic construction in Hausa has exactly the same semantic interpretation as the constructions referred to in English. One factor is that the Hausa construction plays the role both of clefting and focus-stress, and is thus more common than either in English. But more importantly, I think that just as in English the semantic focus may in fact be only a part of the syntactic focus, in Hausa the opposite is sometimes the case i.e. the semantic focus is attached to a larger constituent than the syntactic focus. Consider (1) and (2), which I repeat here in a combined form for convenience:

- (10) kwai (nee) suka sayaa
 eggs (be) they bought

Now the presupposition is normally

- (11) sun sayi wani abu
 they bought something

but the actual verb sayaa - to buy, may not be presupposed when (10) is uttered, simply

- (12) sun yi wani abu
 they did something

i.e. only the fact that the subject sun - "they", is the subject of some action is presupposed. Thus (10) may receive the same interpretation as VP - focus as in

- (13) sayen kwai (nee) suka yii
 buying eggs (be) they did

Occasionally, VP - focus like (13) may receive the same interpretation

as S-focus like (14)

- (14) sun sayi kwai nee
they bought eggs (be)

in which the presupposition simply is "something happened/will happen/ is happening (which is relevant to the present discourse e.g. as the cause of something we are discussing)". What is even stranger is that when a subject NP is focus, under certain circumstances the semantic focus may not be the subject, but the whole S e.g. (15) interpreted as (14) with "something happened" etc as the presupposition¹⁰.

- (15) suu nee suka sayi kwai
them bc they bought eggs

These optional extensions of the scope of focus display a clear regularity. The object focus is extended to the node immediately dominating it in deep structure, VP, and VP and subject focus to the node immediately dominating them in deep structure, S. Problems would arise in incorporating this variability of scope into a rule for the interpretation of focus if it were proved, as is my intention, that such a rule can only operate after the transformational creation of the focus element, not at deep structure.

The notions focus and presupposition are in my view more useful than the ways in which the semantics of this type of emphasis have been characterized in the past. Focus-emphasis has often been referred to as "contrastive", since such sentences may be extended by a denial that another element could take the place of the focus, in

spread

10. Parsons calls this ~~contrastive~~ emphasis. It occurs sporadically in Hausa literature and I have heard it a handful of times in conversation without being able to make a general statement about its conditions of use.

what it is. Although unspoken, this presupposition "they bought something" creates the conditions for the following focus-emphatic sentence:

Also the impression is sometimes given that the primary use of focus-emphatic sentences is in answering special questions. Again this is a special case of focus-presupposition, rather than a defining characteristic. When a question like (19) (a) is asked, the presupposition contains an unspecified element "something", the identity of which is being requested, and the answer (19) (b) takes up the same presupposition, the focus fills in that identity.

(19)(a) mee (nee nee) suka sayaa?
what (be be) they bought? i.e. what did they buy?

(b) kwai (nee) suka sayaa
eggs (be) they bought

1.5. Other Types of Emphasis

Parsons has classified emphasis in Hausa into three types, of which focus-emphasis is type (b). I shall look briefly here at types (a) and (c).

Type (a) sentences have the form of a nominal, adverbial or verbal element followed optionally by a "modal particle" (kumaa, kuwa, maa, dai, fa, kam) to the left of a clause with general tenses. The element in the clause with which the left-hand element is equated is usually represented by a pronoun, as in (20) (a), although it is sometimes deleted as in (20) (b), and may (in the case of some verbal and adverbial elements) appear in full¹¹.

-
11. egg. (C) sayen kwai dai su naa saye
(as for) buying eggs they are buying.
alongside (D) sayen kwai dai su naa yi
(as for) buying eggs they are doing
and (E) can maa sun tafi can
there too they went there.

(20)(a) kwai, sun sayee shi
eggs they bought it

(b) kwai, sun sayaa
eggs they bought

Between the left-hand element and the clause, a pause may intervene (indicated here by a comma) and the high-tone appropriate to a sentence-initial position is usually resumed, rather than down-drift continuing from the left-hand element ¹². By these criteria this type of emphasis can be distinguished from focus-emphasis, even where in the latter there is no copula or distinctive relative tense-forms in the Auxiliary e.g. in

(21)(a) kwai zaa su sayaa
it is eggs they will buy

(b) kwai # zaa su sayaa
(as for) eggs, they will buy (them) ¹³

(a), the focus-emphatic, has no pause or other sentence juncture features (represented by #) between kwai and the clause, whereas (b) does.

12. Within a sentence in Hausa, the pitch-difference between high and low tone syllables is greatest at the beginning, and after each subsequent low tone the following high tone does not resume the pitch of the preceding high tone but drops slightly in pitch. This is called down-drift. Hence in (F) where mootaa is the focus the sentence has the tone contour (G), where it is the topic, it has the tone contour (H)

(F) mootaa zaa su sayaa
car they will buy

(G) — — —
mootaa zaa su sayaa

(H) — — —

13. The tense here is Future I, which has no distinct relative form (See Appendix I)

I shall refer to (a)-type emphasis as topicalization, although I am aware that this term has been applied to a construction which is semantically and probably syntactically quite distinct in English¹⁴. I feel this term is appropriate nevertheless since the left-hand element in such sentences is the topic of discourse which the speaker wishes to bring out, and the rest of the sentence a comment on it. It is therefore similar to the construction in English consisting either of an element to the left followed by a clause in which there is a pronoun equated with the left-hand element, or a similar structure with as for preceding the left-hand element. The former has been analyzed (by Ross (1967) and others) as resulting from a transformation DISLOCATION, which copies the topic element to the left, leaving a pronoun behind. As well as this rule of LEFT DISLOCATION, there is also RIGHT DISLOCATION which forms sentences like (22) in English.

(22) I bought them, the eggs

14. Topicalization has been applied to sentences like (I) in English

(I) eggs I like

Semantically such sentences seem to be more closely related to focus-emphatics than to topic-comment structures in the sense in which I use the term here, although possibly features of both types are present. One difficulty of interpretation is that the use of such sentences is more restricted in British than in American English, particularly in the dialects of the latter influenced by Yiddish. Postal has named the transformation which frontshifts elements in this way X-movement after Yiddish.

Parsons' (c)-type or "graduated" emphasis shares with (b)-type all the features of the clause i.e. it is like a relative clause without any relative marker. ^{Apart from certain differences in tense possibilities,} Where it differs is in the focus. The range of elements appears to be the same but the focus is preceded by sai, koo or har and with most speakers may not be followed by the copula. Sai can be translated as "only", and koo and har as "even"¹⁶.

(27) $\begin{Bmatrix} \text{sai} \\ \text{har} \end{Bmatrix}$ kwai (*nee) suka sayaa

$\begin{Bmatrix} \text{only} \\ \text{even} \end{Bmatrix}$ eggs (*be) they bought

(28) koo kwai (*nee) ba su sayaa ba
even eggs (*be) they did not buy

There seems to be no particular difficulty in regarding such sentences as focus-emphatic sentences. In an analysis in which the copula nee/cee is present in the basic structure of focus-emphatics (e.g. focus raising; see Chapter 2), it would be deleted obligatorily just in case sai, koo or har is attached to the focus. In an analysis in which nee/cee is optionally generated by the base (e.g. focus fronting; see Chapter 2), it would seem possible to make a disjunction between nee/cee and these gradational elements as S-daughters given that sai, koo and har are originally part of the rewrite of S and are later attached to NP, VP etc. as suggested for only and even in English by Kuroda (1969). Such a disjunction would ensure that

16. The Hausa system of particles expressing gradation in relation to expectation or "presupposition" is differently organized from that of English. Both har and koo express deviation from expectation, but with har the deviation is as it were "upwards" on a presupposed scale, and with koo "downwards".

either one or the other is generated, not both.

1.6. Special Questions as Focus-Emphatic Sentences

Special questions in Hausa have the same form as focus-emphatic sentences with a WH-(interrogative) element as the focus, as in (29), or within the focus, as in (30)

- (29) nee (nee nee) suka sayaa?
 what (be be) they bought?

- (30) Kwan waa (nee nee) suka sayaa?
 eggs of who (be be) they bought?¹⁷

The grammar would be more economical if the process by which special questions are derived were considered the same as that by which focus-emphatic sentences are derived. The objection to this lies not within syntax, but in semantics: it is not the case that there is always a presupposition to a question like (29), of the form

- (31) sun sayi wani abu
 they bought something

Special questions may occur without presupposition of this kind, as in English, so the semantic interpretation rule dealing with focus may have to be altered to account for questions.

Assuming, however, that special questions are considered

17. Most WH-question word or phrases may be followed by nee/cee but with nee - what and waa the copula appears to be duplicated. This could be the result of the transfer of a second S-focus interrogative nee to the post-focus position (see Chapter 8, footnote 5); or the first of the pair is not the copula at all but part of the WH-words, i.e. meeñee/meecee and waanee/waacee since it is known that alternate forms do exist e.g. meeyee and waayee in Kano.

as focus-emphatic sentences, there are questions in which the WH-element occurs in its normal position as generated by the base, which could form part of the deep structure of questions, (just as non-emphatic sentences could form part of the deep structure of focus-emphatic sentences)

e.g. (32)

- (32) sun sayi mee?
 they bought what?

Where such sentences appear in surface structure, they are not interpreted as questions without the focus-presupposition structure, but as marked forms, indicating either that they are echo-questions, or a rather deliberate and precise type of question, the presuppositions of which I have not yet been able to work out.

CHAPTER 2

ANALYSES OF FOCUS - EMPHASIS

2.1. The Types of Analysis under Consideration

In this chapter, I shall survey a number of analyses which have been made of focus-emphatic sentences in Hausa and other West African languages, and in English, in order to see which promise to be most suited to Hausa, and how these analyses can be most fruitfully compared. The analyses I shall touch upon fall broadly into three types:

(a) Those which take focus-emphatic sentences in Hausa and languages in which there are similar constructions to be roughly what they appear in surface structure, (without a deep structure in which the order of constituents is different), i.e. a focus element followed by an optional emphatic particle followed by a clause in which the focus is anaphorically present, either in its full form¹, as a pronoun, or zero. Naturally all those working within an Immediate Constituent framework produce analyses of this kind, since their theory lacks a concept of deep-structure. They are usually quite aware that some kind of systematic relationship exists between "emphatic" and "non-emphatic" sentences, but this remains peripheral as it cannot be formalized. Some transformational grammarians have also adopted a similar type of analysis in which there is no change in the order of constituents between deep and surface structure. This I shall call

1. In Yoruba and a number of other West African languages if a verb is focalized it is repeated in full in the clause. This does not apply in standard Hausa, where the verb is replaced by the PRO-verb yi.

the static order approach and will be exemplified here in its non-transformational version by Welmers (1964) and its transformational version by Awobuluyi (1971).

(b) Those analyses which regard the focus element as having been moved from within the clause by a frontshifting transformation. The deep structure of the emphatic sentence is conceived as the same as that of its non-emphatic counterpart except for the addition of some emphasis-marker. The emphatic particle which follows the focus is either inserted transformationally or is present in the deep structure and moved to the left along with the focus by the emphasis transformation. The original position of the element frontshifted is filled either by a full copy or by a pronominal copy or is deleted altogether. I shall call this the focus-fronting approach, and it is exemplified by Schachter's analysis of Hausa (1966).

(c) Those analyses which view such sentences as essentially the same as cleft sentences in English, i.e. sentences of the form (1).

(1) it - be - focus - relative clause introduced by a WH word² or that e.g.

(2) it was eggs {which
that} they bought.

In order to justify this claim it is necessary to show why in most West African languages, including Hausa, no it-like element or relative clause introducer is present, and why in some languages the

2. By a WH-word I mean who, which, how etc., that may be deleted in English where the element equated with the focus is an object, but unlike in Hausa this also occurs in relative clauses of as a result of THAT DELETION.

emphatic particle is not a copula like English be³. Apart from these considerations, the derivation of cleft sentences itself is a subject of dispute. The types of analyses proposed fall roughly into two categories:

(0.1) those which regard cleft sentences as derived from pseudo-cleft sentences i.e. sentences of the form:

(3) relative clause introduced by a WH word - be - focus
e.g. (4) what they bought was eggs

The term focus is used to describe the predicate NP of the copular sentence here as it seems to play the same thematic role as focus in cleft sentences, with the subject relative clause expressing the presupposition just as the right-hand clause does in cleft sentences. Indeed, it is the synonymy of pseudo-cleft and cleft sentences which share the same focus and clause which has led grammarians to derive the cleft from the pseudo-cleft. Since the focus-presupposition relations are specified in the pseudo-cleft structure, this pseudo-cleft approach avoids the problem discussed in Chapter 1, Section of having to allow the emphatic transformations to change the meaning of the deep structure. Akmajian has proposed (1971) that cleft sentences in English are to be derived from pseudo-clefts by EXTRA-POSITION of S. Bagari adopts a slightly different approach for Hausa: in his formulation of the transformation, the entire subject NP of the pseudo-cleft and the predicate focus + copula are reversed in their order and the relative head of the subject deleted.

3. The status of such particles is usually disputed. To insist that they should be classified always as distinct from the categories Verb and Copula would make the grammars of languages like Hausa (in which nee/cee is clearly a copula) more complicated by introducing a new category.

(ii) At the same time it has been suggested by several linguists e.g. Chomsky (1970) that the pseudo-cleft structure itself is derived from a deeper source containing the corresponding non-cleft sentence e.g. for (4), (5)

(5) they bought eggs

Such proposals have been called "extraction" analyses (Faraci 1971)⁴ since they extract an element from the non-cleft sentence (e.g. eggs in (5)) and place it to the right of the copula be. I shall concentrate my attention here, however, on the analysis of Emonds, who regards cleft sentences (and possibly also pseudo-clefts) as derived from deep structures in which the corresponding non-cleft sentence is embedded in the subject NP of a copular sentence. The focus is then raised by a transformation (FOCUS PLACEMENT) from this embedded sentence into the predicate of the higher copular sentence. I call this the focus-raising approach.

I shall adopt this latter scheme of Emonds for the present argument. Instead of considering focus-raising as an approach to the derivation of surface pseudo-clefts, I shall treat it as if it were an extension of the pseudo-cleft analysis of cleft sentences, i.e. a way

4. Apparently there are a number of unpublished papers on this topic, which I have not been able to consult. A slightly different approach to pseudo-clefts is that of Clifton (cited in Faraci) who derives (A) from a structure like (B) by deletion of identical elements

- (A) what they bought was eggs
(B) what they bought was they bought eggs

sentences similar to (B) occur in Hausa, often without the copula e.g.

- (C) abin da suka {sayaa} # sun sayi kwai (nee)
 what they {bought}: they bought eggs (be)
 {did}

of deriving an intermediate pseudo-cleft structure from which in turn surface cleft sentences are derived.⁵

The latter focus-raising approach (c.ii) has a lot in common with the focus-fronting approach (b), as both involve movement of an element from a non-emphatic sentence into a focus position. For this reason I shall on occasion refer to them together as focus-placement. There are of course important differences. Focus-fronting involves simply movement of an element to the left within a simple S, while focus-raising moves the element first to the right across an upper S boundary in a complex S structure, to form a pseudo-cleft structure, before moving it to the left.⁶

2.2. Static Order Analyses: Welmers (1964)

Welmers' description of emphasis in Kpelle provides sufficient illustration of recent non-transformational work in this area of syntax in West African languages for our purposes. The emphatic sentence in Kpelle has the following form:

- (6) { "Subject" or "Object" Noun
"Complement" (i.e. Adverbial) } - 6e - clause in which the emphasized element is usually "recapitulated" by a pronoun.

5. Like Emonds I do not wish to commit myself to an analysis of pseudo-clefts although I feel that the evidence for a focus-raising derivation of clefts is stronger than that for pseudo-clefts in Hausa. (See Chapter 3, Section 10, and Chapter 5, Section 9.)

6. By simple and complex S here I mean that the statement of the transformation FOCUS-FRONTING does not require movement across S of necessity, whereas FOCUS-RAISING does. Naturally I do not wish to imply that elements do not cross S-boundaries as a result of the application of FOCUS-FRONTING; this happens where the focus element is originally within an embedded S.

Such sentences are translated throughout Welmers' article as English cleft sentences; the semantic feature which Kpelle emphatic sentences and English cleft sentences share is said to be "contrast". As in Hausa, special questions also have the form (6): Welmers again links this to cleft sentences by saying that while there is a clear distinction between non-cleft and cleft statements, there is "no appreciable difference" between the non-cleft question (7) and the cleft question (8)

(7) where did he go?

(8) where was it that he went?

In consequence of this (to me rather doubtful) observation, Welmers states that "the emphatic function of be is clear". It is true that the idea of focus can be grasped fairly easily intuitively; this is a far cry from making the concept clear within a theory, however.

Turning to syntax, most of the article is taken up with specifying the categories which may be "emphasized", and the effect of this on the clause. Welmers seems to deny that the left-hand emphasized element can genuinely be said to carry the grammatical function "subject" "object" "complement" etc, although this point is never fully clarified. The nearest approach to a description of the syntactic structure of emphatic sentences is found in a passage in which the "identificational" use of be, as in (9) is remarked upon:

(9) sumo be
it is Sumo.

Thus emphasis is said to be "simply SEPARATE IDENTIFICATION of some element in the sentence". Both the string focus + be and what follows it (i.e. the clause) are full sentences in their own right e.g. (10)

could be analysed in the same way as its translation.

- (10) sumo ɓé. ɲá kàa
it is Sumo; I saw him

Finally, however, Welmers comes out against analyzing emphasis as parataxis ("the setting of one sentence after another in simple sequence") because (as in Hausa) "there is nothing, in terms of pause or terminal intonation, to signal the end of a clause after ɓé". Significantly, the article ends with a non-emphatic sentence followed by all the possible emphatic sentences which can be formed based upon it, with different constituents as foci. Thus the connection between the non-emphatic and emphatic sentence is implied, but cannot be brought out because of the limitations of syntactic theories based on surface structure alone.

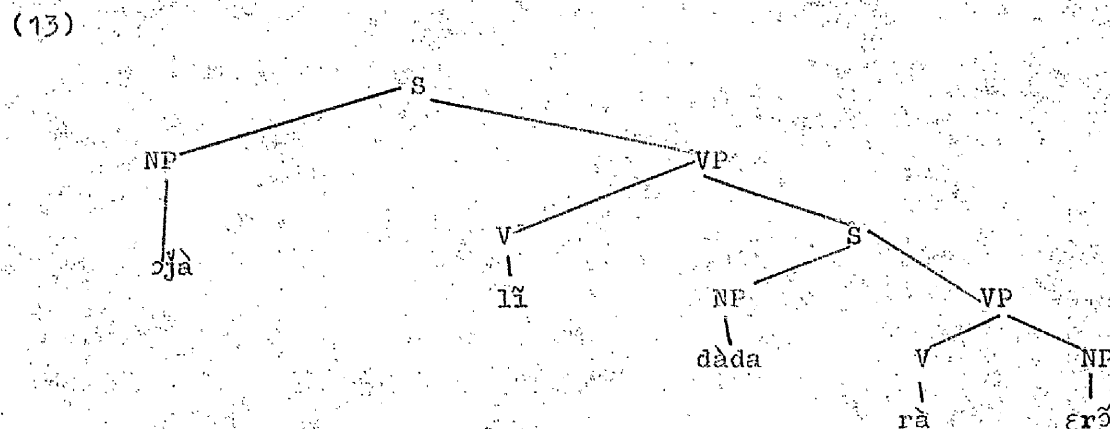
2.3, Static Order Analyses II: Awobuluyi (1971).

The theory used by Awobuluyi (1971) in his analysis of focus-emphasis in Yoruba is transformational and therefore not confined to surface structure. All that is intended in including this analysis in this section is that movement transformations are not used in deriving focus-emphatic sentences according to this approach, in contrast to the analyses which follow. In his paper, Awobuluyi is not concerned ultimately with the description of focus-emphasis in Yoruba, but is developing argument against the proposition that the category Preposition can be eliminated from the theoretical vocabulary of deep categories in syntax on the basis of Yoruba grammar. This argument need not concern us here. Emphasis in Yoruba consists of the focus + lì + the clause. The reason why emphasis is relevant to prepositions

is that where a locative or manner NP, which is preceded by lĩ "at" or "in" in non-emphatic sentences like (11), is emphasized, as in (12), it is not preceded by lĩ, but the verb is preceded by a preposition which also has a modal function ti. Awolbuluyi assumes for purposes of argument that the structure of (12) is (13), which he takes to be a formalization of the views of other grammarians of Yoruba about such sentences.

(11) dàdà rà ẹrǒ lĩ ọjà
Dada brought meat at market.

(12) ọjà lĩ dàdà ti rà ẹrǒ
lit. market lĩ Dada from bought meat



The argument is that the insertion of ti into this structure is dependant on four conditions:

- (i) the leftmost NP is or contains an N [+PLACE] or [+MANNER]
- (ii) the embedded S does not contain the verb wà "to be (in a place)"; and
- (iii) the rightmost NP is not identical with the leftmost NP or
- (iv) the embedded sentence does not contain an object NP.

Omitting the details of the argument, it is shown that conditions (iii)-(iv) are ad-hoc, and that they can be eliminated if (14) is

substituted for (13) as the underlying structure (no tree is given)

- (14) ɔʒà lí dàda rà ɛrʒ lí ɔʒà
market lí Dada bought meat in market

Awobuluyi states that conditions (i) and (ii) now suffice for TI-INSERTION, although in fact he introduces a new condition within (i); that the leftmost NP is repeated immediately after the preposition lí in the embedded sentence. Another two rules are then introduced of which one deletes the repeated NP and the other the Preposition lí. The first of these rules also applies where object NP's are emphasized, e.g. in the derivation of (15) from (14) (where TI-INSERTION does not apply)

- (15) ɛrʒ lí dàda rà ɛrʒ lí ɔʒà ⇒
meat lí Dada bought meat at market.

- (16) ɛrʒ lí dàda rà lí ɔʒà
meat lí Dada bought at market

This is then an argument in favour of including the phrase lí ɔʒà in the deep structure of the clause in (12) and by implication of including a copy of other focus constituents in the deep structure of the clause?

The structure (14) has the advantage of specifying the grammatical function of the element equated with the focus directly and does save

7. As such, the first part of Awobuluyi's paper seems to show that lí is a deep-structure element i.e. it is not inserted by transformation, but it is not an argument about its categorial status. Later in the paper arguments are advanced to show that the category Preposition is needed since PP's may be the focus in emphatic sentences whereas Adverbs without underlying Prepositions cannot, and that Verbs can be the focus whereas Prepositions alone cannot.

a little on the conditions of TI-INSERTION as compared with (13).

In fact these conditions can be further simplified since the presence of if before an NP ensures that it is [+PLACE] or [+MANNER] by the selectional restrictions, and the identity condition entails that the feature composition of the focus and the NP in the clause is the same, so that no specific features need be mentioned in the conditions on the rule. Of course, if these sentences were derived by focus-placement the identity condition itself could be dispensed with.⁸

8. In fact, in a more recent article (1972) Awobuluyi has adopted a variety of focus-fronting approach to emphasis in Yoruba, in which emph (associated with a variable attached to the focus) is generated by the Phrase-Structure rule

$$(D) \quad \Sigma \rightarrow \# (\text{emph}) \ S \ \#$$

and later triggers a frontshifting rule which is said to be parallel to that which applies to relative clauses. For the latter Awobuluyi proposes the novel analysis that no relative clauses have heads in deep structure. They are generated by the base rule (E), after which frontshifting takes place triggered by Rel

$$(E) \quad NP \rightarrow \text{Rel} \ S$$

He claims that such an analysis has proved successful with a number of languages, including Hausa, although he admits that the present constraints on the form of grammars might have to be relaxed to accommodate it. For an analysis using a different concept of "headless" relative clauses with a more limited range, see the account of "copying" nominalization (Chapter 5, Section 4) and indirect question relative clauses (Chapter 6, Sections 6 and 7) in this thesis.

2.4. General Criticism of Static Order Analyses.

The main objection however to the derivation of focus emphatic sentences from deep structures of this form, either of the simple type (17) or of the complex type (18)

(17) X - emph - NP VP (PP)

(18) X - emph - S

is the very high cost in the phrase-structure rules. To produce such structures would require phrase structure rules which would generate alongside the normal non-emphatic sentences NP - VP etc. these new strings. For (17) this would require at least two more optional elements preceding the subject, and for (18) the initial rule would have to rewrite S as a disjunction of emphatic and non-emphatic structures, thus doubling its complexity. Moreover a new category of emph (emphatic marker) would be introduced and X would have to be specified as a disjunction of all the categories which can act as focus in the language concerned. This would require initial rules like (19) for (17), and (20) for (18)

$$(19) \quad S \longrightarrow \left(\left\{ \begin{array}{c} \text{NP} \\ \text{PP} \\ \text{VP} \\ \text{V} \\ \text{S} \end{array} \right\} \text{emph} \right) \text{NP VP (PP)}$$

$$(20) \quad S \longrightarrow \left\{ \begin{array}{c} \text{NP} \quad \text{VP} \quad (\text{PP}) \dots \\ \left\{ \begin{array}{c} \text{NP} \\ \text{PP} \\ \text{VP} \\ \text{V} \\ \text{S} \end{array} \right\} \quad \text{emph} \quad \text{S} \end{array} \right\} \quad 9$$

Not only would such rules be complex, but they would be too powerful and would generate a huge number of ungrammatical strings. This is because a structure like (15) in Yoruba or its equivalent (21) in Hausa which would underly (22) in Awobuluyi's analysis is only well-formed when there is identity between the focus NP and an NP in the clause.

(21) naamaa nee Dada yaa sayi naamaa a kaasuwa
meat be Dada bought meat at market

(22) naamaa nee Dada ya sayaa a kaasuwa
meat be Dada bought at market

There is no way in which the phrase structure rules themselves can be constrained so that only structures containing an element identical with the focus in the clause are generated by (19) or (20), i.e. blocking sentences like (23)

(23) *naamaa nee Dada ya sayi kwai a kaasuwa
meat be Dada bought eggs at market

9. The set of elements here is roughly what is needed for Hausa, although no account is taken of the NP-like quality of all focus-elements. A saving could be made on (20) if emph were replaced by Cop. If in addition, one adopted Emonds' proposal that S is generated in the base as a right-hand daughter of S, not extraposed from within an NP, one might try to set up a static order analysis of focus-emphasis based upon the phrase-structure rules (F) and (G).

(F) $S \longrightarrow \text{NP} \quad \text{VP} \quad \text{S}$

(G) $\text{VP} \longrightarrow \left\{ \begin{array}{c} \text{V} \quad \text{NP} \\ \left\{ \begin{array}{c} \text{NP} \\ \text{PP} \\ \text{VP} \\ \text{V} \\ \text{S} \end{array} \right\} \quad \text{Cop} \end{array} \right\}$

But the disjunction in (G) would be incorrect as a characterization of copular S in Hausa, which may only have NP and Adj in the Predicate.

As with relative clauses, ill-formed strings like (23) must be filtered out by the deletion transformation itself.

For the above reasons the analyses which generate only the non-emphatic sentences in the base, like focus-fronting, pseudo-cleft and focus-raising are likely to be simpler than the static order analyses, providing the transformations which produce focus-emphatic sentences are themselves simple or independently motivated in the grammar. Besides, it will become obvious in the course of exposition that movement rules are absolutely necessary to account for certain syntactic facts in Hausa focus-emphatic sentences; particularly those presented in Part I. Part I is presented as an argument against the pseudo-cleft analysis, not explicitly against static order analyses, but it should be continually borne in mind that the arguments there for the necessity of particular types of movement in the derivation of focus-emphatic S are equally valid as arguments for the necessity of movement rules in general.

2.5. Focus-Fronting: Schachter (1966)

Schachters 1966 paper on Hausa illustrates the advances which transformational theory made possible in the study of focus-emphasis. Having broken out of the strait-jacket of Immediate Constituent Analysis, the grammarian could relate emphatic to non-emphatic sentences directly by means of movement transformations. The criticism which could perhaps be levelled at Schachter is that he did not apply the theory boldly enough to the Hausa material, and through certain misconceptions failed to simplify the generalizations arrived at.

Schachter's phrase structure rules generate nec/cee

(ne/ce) in his orthography) in the following way:

(24) (his B.1) S \longrightarrow # NP Pred #

(25) (his B.5) Pred \longrightarrow $\left\{ \begin{array}{l} \text{NP } \text{ne/ce (Adv)} \\ \text{VP (Adv) ne/ce} \end{array} \right\}$

Schachter does not attempt to reduce the scope of the disjunction in (25) and thereby to unite the two occurrences of nee/cee¹⁰ i.e. the copular and the nee of sentence-emphasis. Nor does he attempt to assign the two occurrences of nee/cee to the same category, say Copula, although nee/cee is treated as a unity by the emphatic frontshifting rules. Indeed he states that nee/cee has two distinct functions, "equational" and "emphatic", and does not venture into semantics far enough to establish any relation between these two functions.

The emphatic rules which are proposed are successful in linking together all the types of sentences introduced except (a) (verbal focus-emphasis without nee/cee) in Chapter 1, Section 2. (d) (S-focus - Schachter's Sentence Emphasis) is generated by the lower line of the disjunction in (25), which then undergoes a transformation (SENTENCE EMPHASIS T.4) which adds a marker changing nee/cee into nee. Verbal focus-emphatic S with the copula (b) and emphatic copular S (c) are produced by frontshifting emphasis transformations operating on the lower and higher lines of the disjunction in (25) respectively. Schachter states the "general shape" of such rules as follows:

10. A strange feature of (25) is that nee/cee following VP is not shown as optional. Whether this is an oversight, or it is really intended that all verbal sentences should have a final nee in deep structure, I cannot tell. Later on I show how making nee/cee optional here can also increase the generality of the emphatic frontshifting rule.

(26)

SD:	#	-	X	-	Y	-	Z	-	ne/ce	-	#
	1		2		3		4		5		6
SC:	1		3		5		2		4		6

i.e. an element is moved to initial position and nee/cee to post-initial position.

Unfortunately, instead of making this simple rule the basis of his analysis, Schachter goes on to list five separate emphatic rules each dealing with the frontshifting of one type of element. Furthermore, even this proliferation of rules fails to describe the data adequately, since it does not cover focus-emphasis without nee/cee following the focus, which is obviously closely related to the type with nee/cee, nor does it handle the emphasis of Verbs and Verb-Phrases. I shall briefly show how these rules can be collapsed, and how the single rule which results can be extended to these latter types. The simplified rule will become the basis of what I shall call the focus-fronting analysis from that point on.

The first movement rule proposed is ADVERB EMPHASIS (his T.6). This must be distinguished from nominal emphasis, according to Schachter, as adverbs always take nee as in (27), even though the nominal forms to which they are identical are feminine.

- (27) jiya $\left. \begin{array}{l} *cee \\ nee \end{array} \right\}$ na gan shi
 yesterday be I saw him.

To account for this Schachter inserts the marker n before nee/cee as part of the emphasis rule. By later morphophonemic rules this produces nee. This is unnecessary as the nee/cee AGREEMENT rule needs merely to be constrained to operate only for NP's; where the

preceding constituent is a PP or Adv, the unmarked form nee is automatically generated. Schachter's second rule is SUBJECT EMPHASIS (his T.7); here he takes (28) to be a product of focus-emphasis alone, and further states that a pronoun may intervene between the focus NP and nee/cee only where it is the subject which is emphasized. Hence a pronoun is inserted following the focus NP by the emphasis rule itself.

- (28) Hawwa ita cee ta sauka
Hawwa herbe arrived

In fact, both these contentions are wrong. (28) is a product of both topicalization or dislocation (in the sense introduced in Chapter 1, Section 5) and focus-emphasis combined. Hawwa is the topic, which is placed in leftmost position, and Hawwa is also the focus, but it is pronominalized by the Hawwa to its left yielding ita in post-initial position. Also such constructions are perfectly grammatical with objects, as in (29), or with NP's bearing any other grammatical function.

- (29) Hawwa ita cee ya ganii
Hawwa her be he saw

Hence there is no reason to regard the conditions on subject emphasis as differing from those on any other NP.

Another peculiarity of Schachter's treatment is that he considers SUBJECT EMPHASIS to be responsible for emphasis in copular sentences, presumably on the grounds that a pronoun may follow the emphasized NP, as in (30), which as we have seen is an invalid argument.

- (30) Karen nan (shii) nee dabbaa mai hankalii
(?)it's this dog that's an intelligent animal

Now Schachter's translations of such sentences, with or without the pronoun, certainly make it appear that it is the original subject which is emphasized. I would query the above translation: the more natural interpretation in (30) of dabbaa mai hankalii is as a definite NP ("the intelligent animal") and of the sentence as a whole as related to deep-structure (31), rather than (32).

(31) dabbaa mai hankalii karen nan nee
the intelligent animal is this dog

(32) karen nan dabbaa mai hankalii nee 11
this dog is an intelligent animal

(32) has an emphatic form (33):

(33) dabbaa mai hankalii nee karen nan
it's an intelligent animal that this dog is

In this thesis I take the position that only predicate NP's are emphasized in copular sentences (hence the name of the transformation PREDICATE EMPHASIS). It is possible that in some dialects either the predicate or subject NP can become the focus, but Schachter's position of confining the rule to the subject NP is, I think, untenable.

Returning to Schachter's emphasis rules, the next is EMPHASIS OF OBJECT, or OF OBJECT FOLLOWING \emptyset (T.8). Here it is the second part which causes trouble. The "object following \emptyset " refers to NP's expressing destination which occur without a preposition (or with the preposition \emptyset , as Schachter puts it). This is included together with objects as, in the dialect studied by Schachter, they

11. My examples are in the dialect in which dabbaa is variable in its gender depending on the gender of its referent, not the dialect of Schachter's informant.

take either nee/or cee depending on the gender of the NP. e.g. (34).
I know speakers of this latter dialect, but in the dialect which I
studied destination objects like other PP's take only nee i.e. (34)
is ungrammatical.

(34) (*) Kanoo cee muka tafi
Kano be we went

In Chapter 3, Section 8, I further argue that such destination NP's
are PP's of the form $\bar{A} + NP$ in underlying structure, and that the
transformation A-DELETION is obligatory following verbs of motion,
whereas it is optional otherwise. Within this framework, Schachter's
example could result from the pruning of the PP node after A-DELETION.
Since only an NP node remains, the normal nee/cee AGREEMENT rule would
then apply, whereas in my examples perhaps the AGREEMENT rule is
ordered before A-DELETION. Therefore there is no reason to distinguish
this type of emphasis from adverb or PP emphasis.

Schachter's fourth rule is INDIRECT-OBJECT EMPHASIS (T.9).
This is distinguished from the other rules by the fact that the
emphasized NP may be optionally replaced by a pronoun as well as
deleted, as in (35),

(35) Hawwa cee ta gayaa $\left\{ \begin{array}{l} wa \\ mata \end{array} \right\}$

and by the fact that the indirect object marker wa is needed in the
structural conditions to add the optional pronoun. Schachter says
that this pronoun is similar to the pronoun inserted by SUBJECT
EMPHASIS; but we have seen that the presence of the latter indicates
quite a different structure from simple focus-emphasis. The question
of under what conditions the element equated with the focus is deleted,
and under what conditions pronominalized, is a broader issue which
must be examined in the light of the fact that the same conditions

(37)

SD:	#	X	$\begin{Bmatrix} \text{NP} \\ \text{PP} \end{Bmatrix}$	Y	nee/cee	Z	#
	1	2	3	4	5	6	7
SC:	1	3	5	rel 2	4	6	7

rel is used here in the same way as Schachter uses it as a marker which by later rules effects a change in the first AUX to relative tense forms.

In order to directly change the AUX by the above frontshifting rule, thus dispensing with rel, one would need to set up two rules, one with the sequence NP AUX in the structural description, for top S subjects, and one with AUX NP for other NP's. This is undesirable for reasons of economy.

2.6. An Extension of Focus-Fronting.

We can now attempt to adapt the above rule to the types of S not discussed by Schachter. Firstly, the focus-emphatic S without a copula, like (38)

(38) wasiikaa ta mantaa da ita
letter she forgot about it

could be analysed either as (i) derived by means of (37) from a structure containing nee/cee, after which a subsequent rule deletes the copula; or (ii) derived from a deep structure not containing nee/cee. In the latter case, the transformation (37) would have to be changed to allow nee/cee to be optionally present in the structural description. However, this would certainly be evaluated as less costly ^{to the grammar} than an additional deletion transformation. ~~to the grammar~~ Generally speaking

too, where the phrase-structure rules provide for a certain structure, as in this case, recourse should not be made to the transformational component. Therefore (ii) is chosen as the canonical form of focus-fronting.

The incorporation of verbal elements presents more of a problem for focus-fronting. Where a constituent containing V is the focus it takes the form of a verbal noun, i.e. presumably V (X) dominated by NP, as in (39)

- (39) { sayee
 sayen mootaa
 sayarwaa
 sayar da mootaa } (nee) muka yi
- { buying
 buying a car
 selling
 selling a car } we did 13

It might seem reasonable to derive (39) from the corresponding non-emphatic (40) and to regard yi - "do" as a PRO-verb.

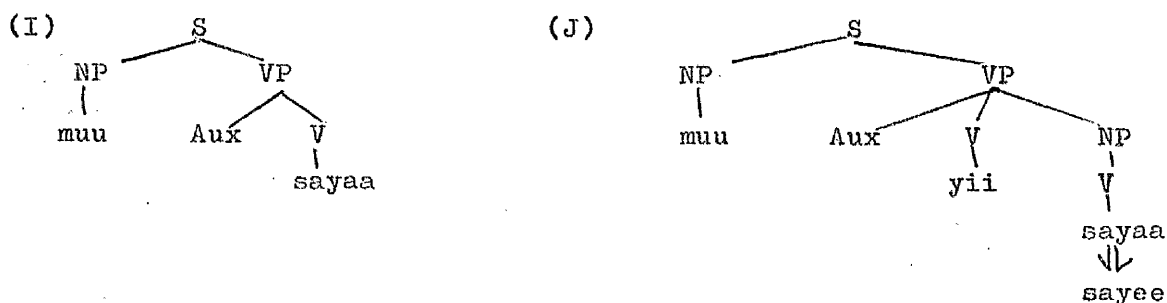
- (40) { sayaa
 sayi mootaa
 sayar
 sayar da mootaa } (nee)
- { bought (it)
 bought a car
 sold (it)
 sold a car } (be)

13. Sayee is a so-called "strong" verbal noun" derived from the verb sayaa - to buy. Such verbal nouns generally have a slightly different form to their root verb and add the -n/-t (\Rightarrow r or gemination) suffix when followed by a direct object. "Weak verbal nouns" on the other hand have a form identical to that of the verb when an object follows, but when none does the suffix -waa is added (and in this case da is dropped).

But if we simply add say V and VP to the disjunction of elements to be focalized in (37), there is nothing elsewhere in the structural description which could serve as an NP which would dominate V and thus yield a verbal noun focus. Moreover the PRO-verb yi would have to replace not only V, but V + NP (e.g. sayar da mootaa) It is easier, therefore to propose (41) as the structures upon which FOCUS-FRONTING operates. The deep structure of (41) would presumably be (42), which then undergoes NOMINALIZATION and EQUI-NP DELETION since to derive (41) from (40) would involve structure-building¹⁴: the addition of NP dominating VP

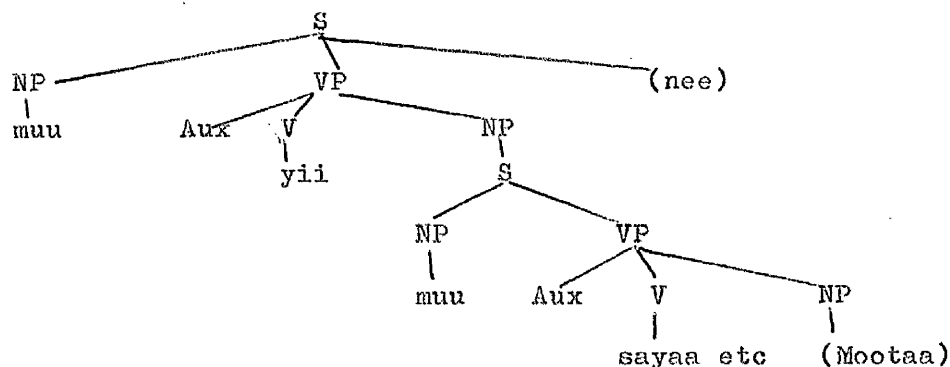
- (41) mun yi { sayee
 sayen mootaa
 sayarwaa
 ??sayar da mootaa } (nee)
- we did { buying
 buying a car
 selling
 selling a car }

14. There is a generally accepted constraint on grammars that while elements may be added under existing nodes, no new nodes should be created by transformation. The change from (I) to (J) appears to infringe this by adding a new NP and V



There is a type of transformation which may build structure, known as Chomsky-adjunction, which changes X into $\begin{bmatrix} Y & X \\ X & \end{bmatrix}$ or $\begin{bmatrix} X & Y \\ X & \end{bmatrix}$. But this cannot create the correct structure (J). Alternatively, though if the extended Δ /structure preserving conception of Chapter 1, Section 3 were adopted, (J) could be created by copying V under the dummy NP node and allowing the PRO-V yi to replace the original.

(42)



Unfortunately, sentences with a weak verbal noun and its object following yi are very odd, (like muu yi sayar da mootaa) possibly even ungrammatical, so they are not the best choice for deep structures. On the other hand many so-called strong verbal nouns may be lexical items, not transformationally derived, as Bagari (1970) claims: it is for this reason that for many of these their objects may not be front-shifted e.g.

(43) littaa^fii nee mu kee { *karaatuu
karantaawaa }

book be we are reading

For these, the deep structure (41) is obviously appropriate, with the lexical verbal NP as object. But I do not think this is true of all "strong" verbal nouns¹⁵.

15. Bagari marks as ungrammatical all emphasis of "object" NP's of "strong" verbal nouns. Some speakers do accept (43) with karaatuu where this has the ("lexical") interpretation "studying", not "reading". Apart from this, (K) with a "strong" verbal noun is acceptable to many speakers.

(K) kwai nee su kee sayee
eggs be they are buying.

Finally the phenomenon of quasi-indirect objects must be explained. Transitive verbs of most classes may be frontshifted without their object NP's. Unless they are of the causative grade, in which case the stranded object can appear preceded by da as in (44), the original direct object in the non-emphatic sentences as in (45) becomes a sort of indirect object preceded by wa in emphatic S with V-focus, like (46).

(44) sayarwaa muka yi da mootaa
selling we did (with) a car

(45) mun gyaara mootaa
we repaired a car

(46) gyaaraawaa muka yi wa mootaa
repairing we did to a car

This suggests that at some stage of the derivation (46) has two objects in the clause, and this causes wa to be suffixed to the verb preceding the first object. The easiest way to incorporate this into focus-fronting is to say that (46) is derived from (47), not (45), and that the relation of near synonymy between (45) and (47) is supplied by the semantic interpretation rules.

(47) mun yi wa mootaa gyaaraawaa
we did to a car repairing

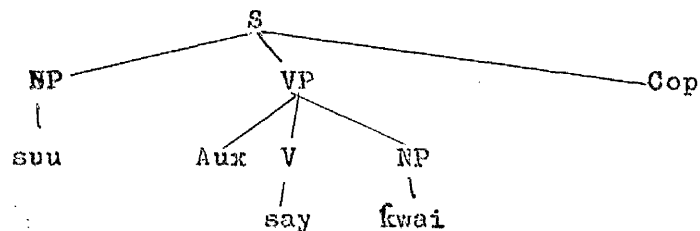
Although this is not entirely satisfactory, the alternatives are not attractive. To derive (47) from (45) transformationally, would involve structure-building, and the derivation of (45) from (47) in Hausa cannot even summon the meagre supporting evidence which generative semanticists claim for a similar derivation in English (Ross 1971)¹⁶.

16. Although yi haka is used in Hausa in an approximately similar way to do so in English, yi is not used as an "emphatic" Auxiliary verb in Hausa, nor as a pro-form for verbs identical to other verbs to its left, except where the identity is created by a copying transformation.

So the focus-fronting approach will remain based on the rule (37), with the addition of brackets around nee/cee. As such it will derive (50), the source of (48), from (49) and (52a), the source of (51) from (52), by FOCUS-FRONTING.

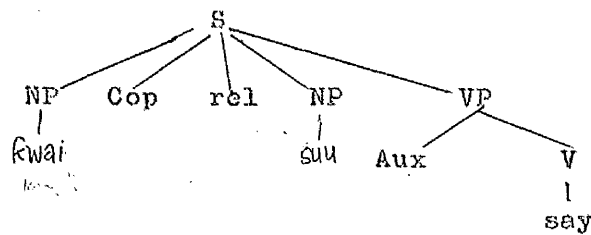
(48) kwai nee suka sayaa

(49)



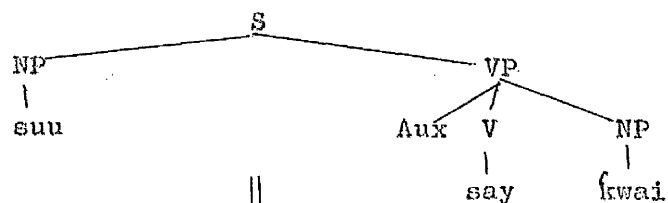
FOCUS-FRONTING

(50)



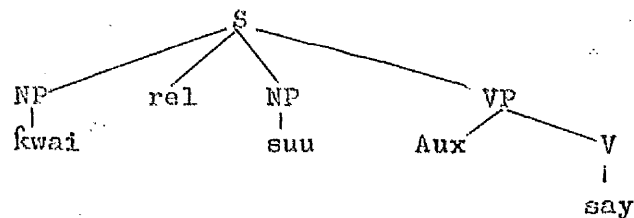
(51) kwai suka sayaa

(52)



FOCUS FRONTING

(52a)



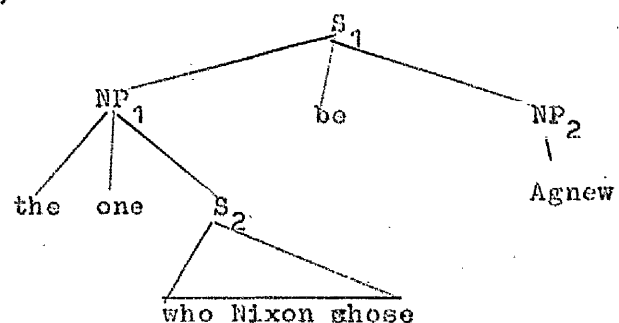
2.7. Pseudo-Cleft Analyses I: Akmajian

Akmajian (1971) claims at the beginning of his paper that the cleft sentence (54) should be derived from the pseudo-cleft (53) i.e. (56) from (55), although he stresses that (55) should not necessarily be considered the deep structure

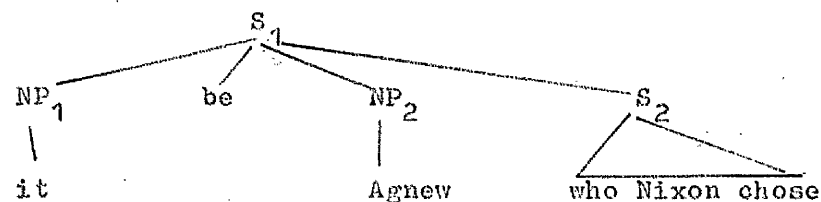
(53) the one who Nixon chose was Agnew

(54) it was Agnew who Nixon chose

(55)



(56)

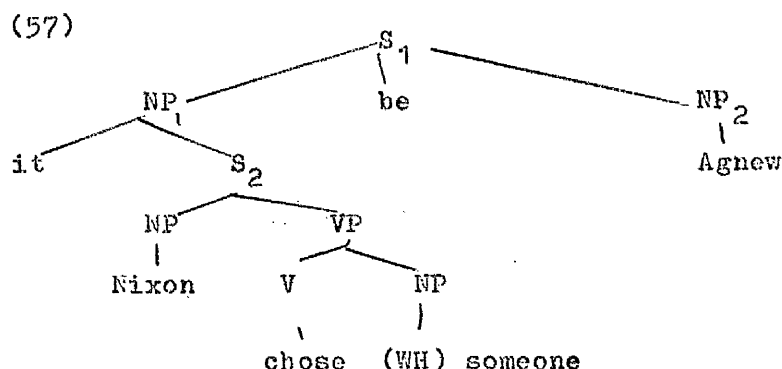


The transformation which moves S₂ to the right is called CLEFT EXTRAPOSITION.

Most of the evidence presented concerns verbal agreement, case-marking and reflexive constructions. This is not touched upon here as this aspect of Akmajian's contribution is discussed in detail in Chapter 3 in relation to agreement in Hausa.

The latter part of the paper is concerned with showing

that (55) is not in fact the correct structure from which cleft sentences should be derived. The correct structure is said to be oneslike(57), the relative clause with an it head being the source of "headless" relative clauses like the subject NP of (58), (following a suggestion attributed to Chomsky)¹⁷



(58) who Nixon chose was Agnew

17. In Hausa there also exist relative clauses which are "headless" in surface structure but which I would argue have a pronominal head in deep structure as in (L) in which the relative clause is derived from (M) and has a specific "constant" interpretation

(L) wanda ya zoo jiya baa shi da kudii
the one who came yesterday had no money

(M) [PROⁱ [PROⁱ AUX zoo jiya]

It is important to distinguish such clauses from those which have Δ as their head in deep structure (which may have the same surface form as those with PRO-heads) and which have a non-specific "variable" interpretation (see Chapter 6). It is the latter to which I am referring when I deal with pseudo-cleft subjects. The transformation which deletes the PRO-head of relative clauses is the same as that which creates surface "headless" genitive and possessive/agentive (mai)phrases and adjectives, where the head noun is identical to one to its left. e.g.

(N) in kaa yi aron keekeenaa nii { na Muusa
mai gudu
kooren nan
kooren } zan hau

if you borrow my bicycle, me { of Musa
which runs (fast)
that green } I shall ride

i.e. I shall ride { Musa's
the one which runs (fast)
that green one }

Unfortunately, (58) and nearly all other sentences with "headless" relative clauses (i.e. those with initial WH-words) as subjects except those with initial what are either odd or completely ungrammatical for many speakers. For this reason Akmajian has to make CLEFT EXTRAPOSITION obligatory on structures like (57) in their dialect to create grammatical surface clefts. In effect, pseudo-clefts and clefts are to be derived from different sources¹⁸.

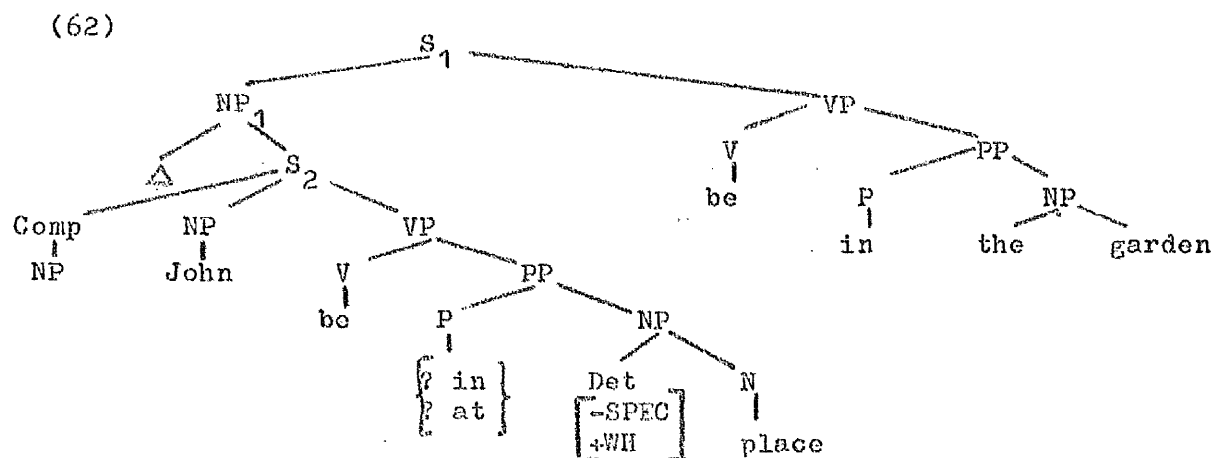
The role of it in this derivation is somewhat suspect. It does not appear to trigger relativization by any form of identity or non-distinctness with the surface WH-head; rather it is the presence of WH in underlying structure which creates the headless relative clause. It appears to act like a dummy so there can be no strong objection to introducing a universal dummy Δ to replace this language-specific one, and adding a rule of IT-INSERTION to English grammar, since the appearance of the "expletive" it is predictable. Hausa, which as we have seen has no parallel element in focus-emphatic sentences, could then be said simply to lack a rule like IT-INSERTION.

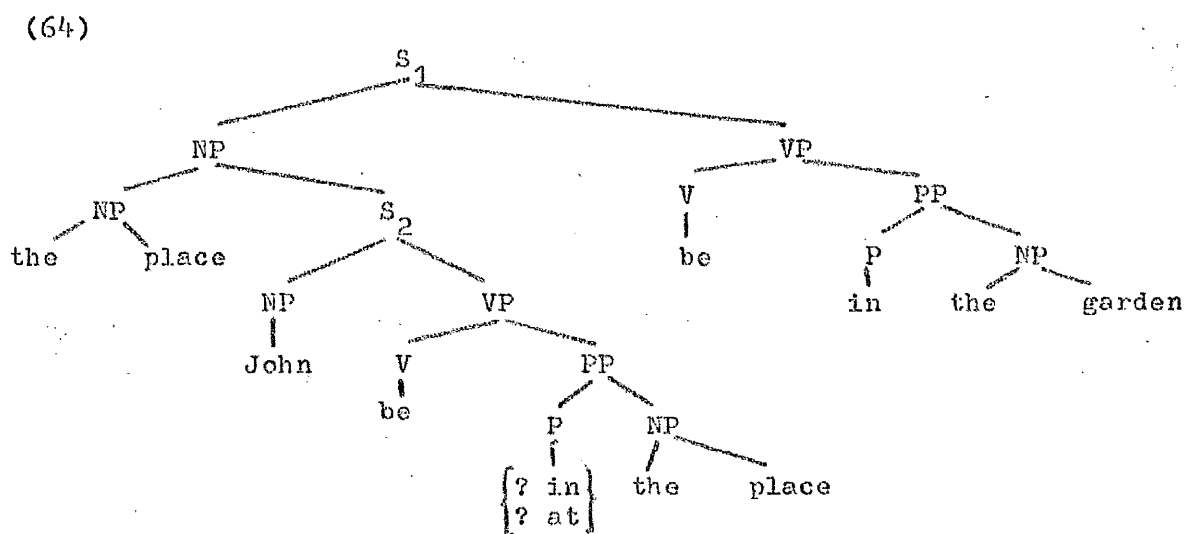
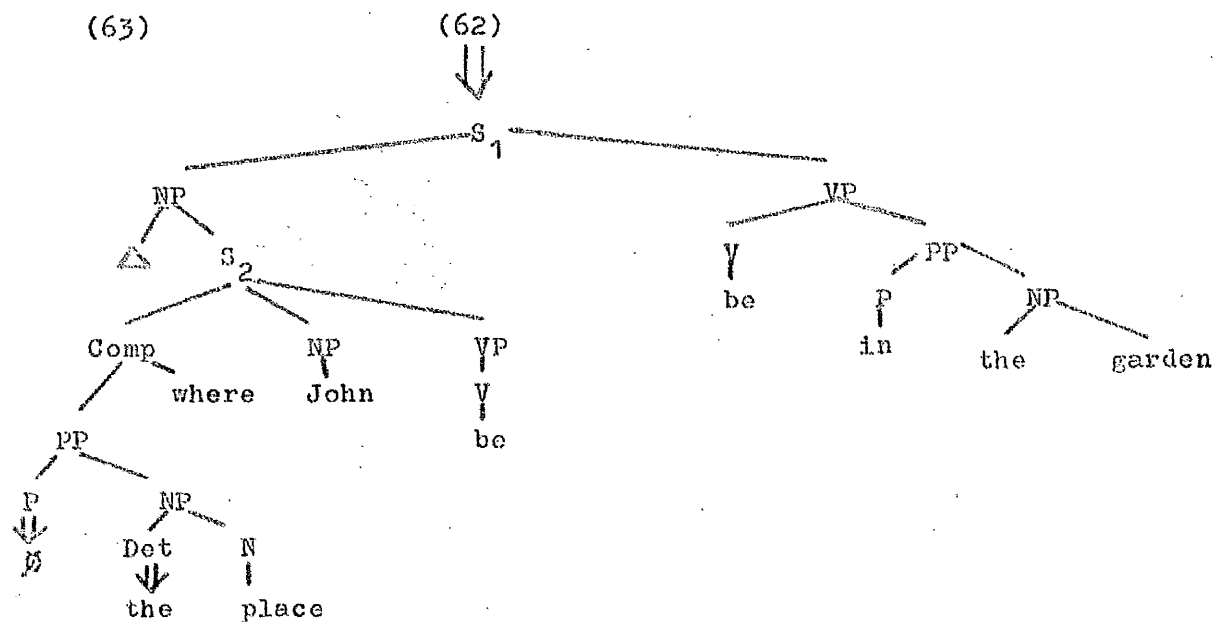
However, structures like (57) certainly explain more facts about cleft sentences than structures like (55). For instance the pseudo-cleft with the head-word (59) means something different from the "headless" pseudo-cleft (60), and it is the latter, not the former which is synonymous with the cleft (61).

18. That is, as far as I understand Akmajian, CLEFT EXTRAPOSITION only operates on headless clauses. The other noticeable difference between clefts and pseudo-clefts in English, that the former have only NP's and PP's as foci, and the latter may also have VP-foci, is accounted for by a condition on CLEFT EXTRAPOSITION.

- (59) the place where John was was in the garden
 (60) where John was was in the garden
 (61) it was in the garden that John was

(59) is normally interpreted as a "descriptive" copular sentence. As an "identificational" or "equational" copular sentence it would be ill-formed, since it equates an NP (the place) with a PP (in the garden). Whether this observation is correct depends in my view on the freedom with which "headless" relative clauses can be formed not only with initial WH-words but by frontshifting of other NP's in the dialect under examination. In my own dialect of English, (59) can receive an "equational" interpretation since it may be derived from (62) which becomes (63) by RELATIVE FORMATION and deletion of the preposition as well as from (64) with a lexical head NP, which yields the "descriptive" interpretation.





The derivation of (62)-(63) is very rough in its present form¹⁹. The

19. In particular, the operation of Pied-Piping, the structure of Comp, the deletion of the Preposition and the formation of where are not fully specified. For the parallel process in Hausa see Chapter 6, Sections 6 and 7

relevance of it is that in Hausa "headless" relative clauses which appear to have definite head in surface structure are more common than in English, e.g. cabin da - "thing that", wurinda "place that", as well as any other NP head. for "what" for "where" In Chapter 6, such clauses are studied in detail and proposed as the subject NP's in intermediate structure of the focus-raising derivation.

The pseudo-cleft analysis can be applied to Hausa focus-emphatic sentences since the it head is not an essential part of the analysis, and there is independent evidence for "headless" relative clauses. Its great advantage is that it provides an immediate explanation of the fact that the clause in focus-emphatic sentences behaves so much like a relative clause, whereas focus-fronting in the form presented in the preceding section makes no generalization about this. Its disadvantages will be pointed out in the rest of this thesis, particularly in Part II.

2.8. Pseudo-Cleft Analyses II: Bagari (19)

An analysis of Hausa focus-emphatics as derived from pseudo-cleft structures has been proposed by Bagari () which does not directly tackle the above issues. However, his analysis has the merit of covering the category of emphatic copular sentences of the form NP - Cop - NP, as well as emphatic verbal sentences. The emphatic transformation he proposes applies only to copular sentences, such as the pseudo-cleft (71), which has a surface form (65), and its effect is simply to reverse the order of the subject and predicate, producing (72), which also has a surface form (66). An obligatory rule then deletes the relative head together with the relative marker da yielding the cleft sentences (67), after which a COPULA DELETION transformation creates (68). The last two transformations apply

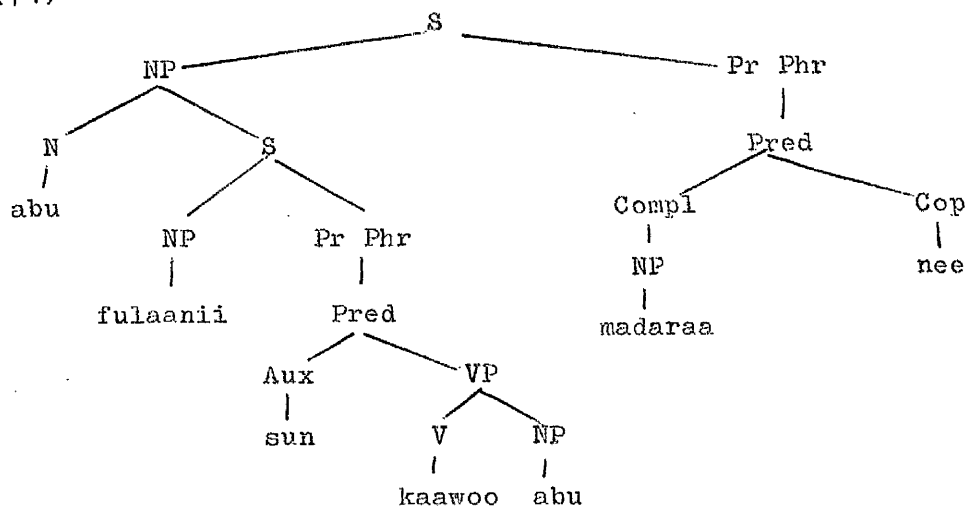
only to verbal sentences, but the emphatic frontshifting rule itself is the same as that which changes (69) into (70)

- (65) abin da Fulaanii suka kaawoo madaraa nee \Rightarrow COPULA
thing that Fulani AUX brought milk be EMPHASIS
- (66) madaraa nee abin da Fulaanii suka kaawoo \Rightarrow RELATIVIZER
milk be thing that Fulani AUX brought DELETION
- (67) madaraa nee Fulaanii suka kaawoo \Rightarrow COP
milk be Fulani brought DELETION
- (68) madaraa Fulaanii suka kaawoo
milk Fulani AUX brought 20.
- (69) Audu sarkii nee \Rightarrow COPULA
Audu is a king EMPHASIS
- (70) sarkii nee Audu
a king is Audu

20. As far as I can tell from his examples in Bagari's dialect (an Eastern one) the copula following the focus in focus-emphatic sentences is always nee, but in normal copular sentences of the form NP - NP - Cop, there is a choice between nee and cee determined by the gender of the subject. If this is true it is interesting since it would mean that in this dialect COPULA AGREEMENT precedes RELATIVE FORMATION (i.e. when the relative clause is headless and therefore not specified as to gender). In the Kano dialect, on the other hand, this ordering is reversed to account for the fact that the copula agrees with the focus NP in gender e.g. (67) would be (0)

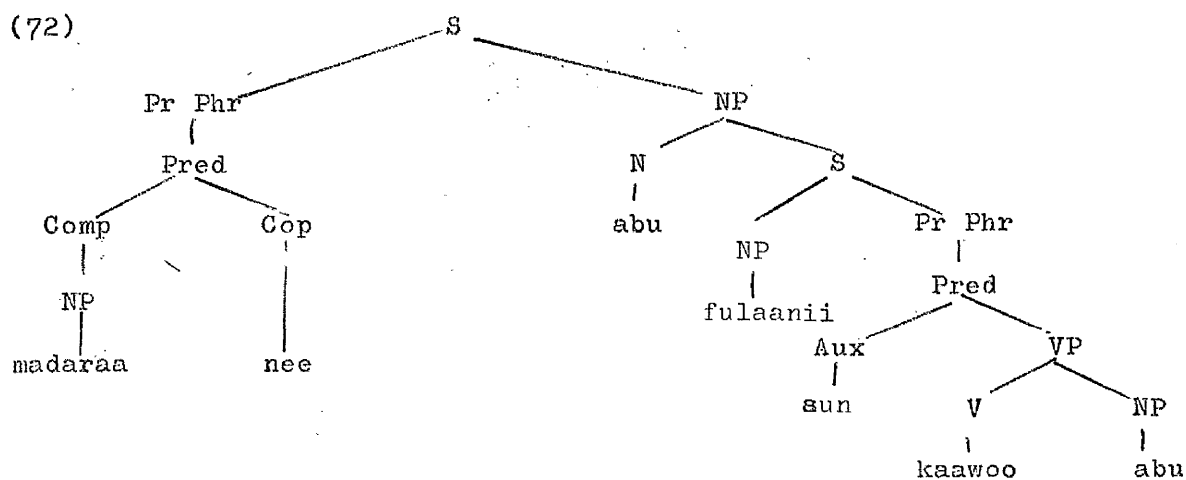
- (0) madaraa cee Fulaanii suka kaawoo

(71)



COPULA EMPHASIS

(72)



To encompass focus-emphasis in Copular as well as verbal sentences, Akmajian's version of the pseudo-cleft analysis, in which the embedded S, not NP, is moved, would have to propose a deep structure like (73) for (70)

- (73) (*) $\left\{ \begin{array}{l} \text{abin da} \\ \text{wanda} \end{array} \right\}$ Audu nee sarkii nee
- $\left\{ \begin{array}{l} \text{the thing that} \\ \text{the one that} \end{array} \right\}$ Audu is is a king

But (73) is completely ungrammatical as a surface sentence because no copular sentence may appear as a relative clause in Hausa. One might try to circumvent this by saying that this restriction is not on the form of deep-structures, but arises because of an obligatory rule which

deletes nee/cee in relative clauses. One could further try to derive appositive and adjectival modifiers by means of this rule coupled with relative deletion e.g. to derive (74) and (75) from the underlying relative structures (76) and (77) respectively

(74) Audu sarkii
Audu the king

(75) mutum babba
man big i.e. a big man

(76)
$$\begin{array}{ccccc} \text{NP} & \left[\text{Audu} & \text{S} & \left[\text{Audu sarkii nee} \right] & \text{S} \right] & \text{NP} \\ & & & & & \\ & & & & & \text{Audu Audu king be} \end{array}$$

(77)
$$\begin{array}{ccccc} \text{NP} & \left[\text{mutum} & \text{S} & \left[\text{mutum babba nee} \right] & \text{S} \right] & \text{NP} \\ & & & & & \\ & & & & & \text{man man big be} \end{array}$$

But it is clear that in such cases the identity is between the head and the subject i.e. $[X [X Y \text{ nee/cee}]]$, whereas the identity in what would be the underlying structure of the relative clause in (73), (78) the identity is between the head and the predicate NP i.e. $[X [Y X \text{ nee/cee}]]$

(78)
$$\begin{array}{ccccc} \text{NP} & \left[\text{PRO} & \text{S} & \left[\text{Audu PRO nee} \right] & \text{S} \right] & \text{NP} \\ & & & & & \end{array}$$

Further, as noted in the last section, the focus NP in copular sentences is always equated with the predicate NP, not with the subject. I can see no way in which the pseudo-cleft structure could be constrained to predict this. Indeed, given that structures like (76) and (77) seem to be in some way more inherently acceptable than those like (78)²¹ quite the opposite might be predicted.

21. cf. the ungrammaticality of such relative clauses as (P) in English

(P) * a teacher which the man is
compared with (Q)

(Q) the man who is a teacher

As far as Hausa is concerned, then, Bagari's analysis appears at first sight to be of greater generality than Akmajian's, and to have captured the undoubted syntactic and semantic similarity in the operation of focus in verbal and copular sentences which Akmajian's analysis would miss. But this assessment rests on the assumption that the syntactic behaviour of emphatic copular sentences and verbal sentences is similar enough to warrant the claim that one transformation is responsible for both. It is this assumption that I question in Part II, at the same time as arguing that simply because Bagari's analysis rests on a pseudo-cleft deep structure, it must fail to account for certain data.

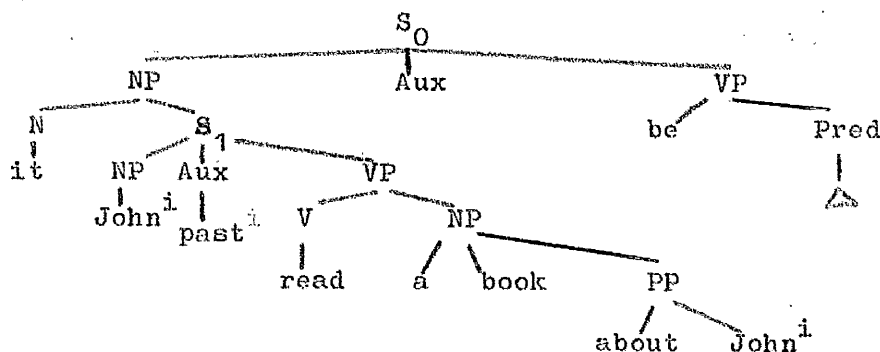
2.9. Focus-Raising I: Chomsky (1970)

Focus-raising in various forms has been proposed to account for the derivation of pseudo-cleft sentences by a number of authors. The analysis I am concerned with here is that of Chomsky (1970). He takes the deep structure of both (79) and (80) to be (81).

(79) what John did was read a book about himself

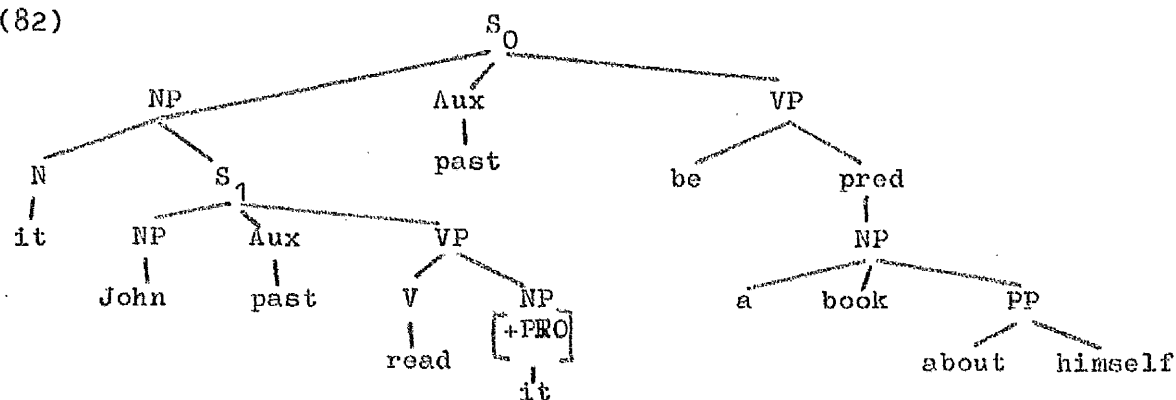
(80) what John read was a book about himself

(81)

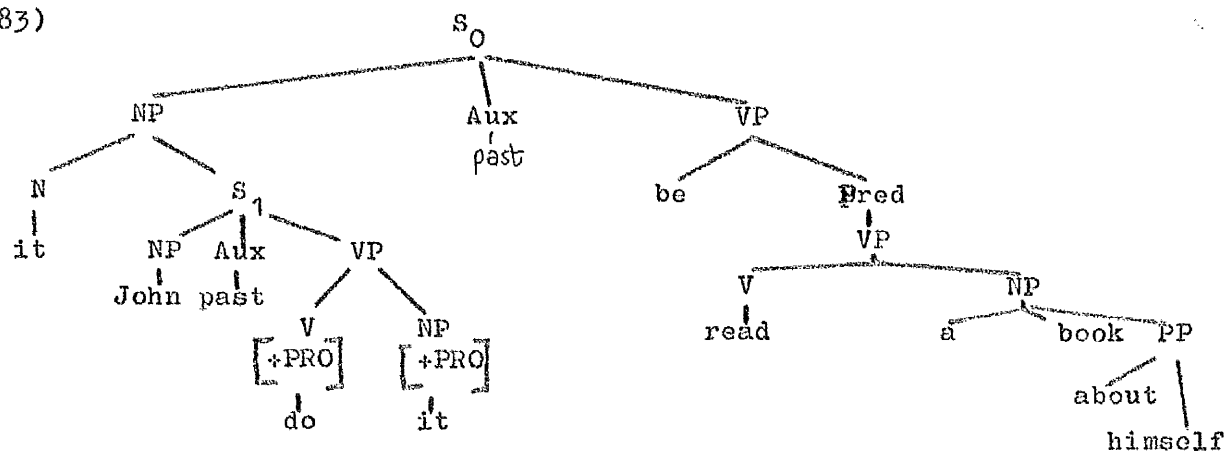


REFLEXIVIZATION applies to S_1 to give John past read a book about himself for both sentences. Then for (80) "a new substitution transformation" (which I call FOCUS-RAISING) replaces Δ with the object of S_1 a book about himself leaving a "PRO-form" it in its place, as in (82). For (79), on the other hand, the whole VP of S_1 replaces Δ . This is then replaced by a PRO-form do it, as in (83). RELATIVIZATION and a rule which converts it-that into what then apply to form both (79) and (80)

(82)



(83)



The theoretical problem here is how to specify the pro-VP do it as having the structure V - NP, since it must appear in underlying structure even where there is no object in the focus VP e.g. (84)

(84) what John did was read

Chomsky's solution is to utilize the conception of categories as bundles of features. If I understand him correctly the PRO-form it is introduced ^{by transformation} and since its complex symbol is [+NP], this is equivalent to an NP node in the revised theory. This would not apply to cleft sentences in English, as VP's cannot be the focus in these e.g. (85)

(85) *it was read a book about himself that John did

Note, though, that this could be a solution to the difficulties encountered with VP foci in Hausa described in Section 3. If focus-emphatic sentences in Hausa were derived from a deep structure like (81) by way of FOCUS-RAISING, if VP were raised it could similarly be replaced by a PRO-VP yii shi - "do it": shi would be an NP since it is [+NP]. Where V alone is the focus the object is stranded as a quasi-indirect object, as in (87) as happens in English pseudo-clefts like (86), except that there is no PRO-object following the focus-verb in Hausa.

(86) what John did to the book about himself was read it

(87) karantaawaa (nee) ya yi wa littaaafin
it was reading he did to the book

Clearly a PRO-direct object is present in the clause in underlying structure in (87), but it is difficult to see how this could be generated as a replacement of V. For a slightly different solution see below in this Section.

Chomsky's pseudo-cleft structures (82) and (83) differ from Akmajian's (57) in having a definite pronoun e.g. it in the embedded S, not (WH) some PRO. In his examples, this it appears identical with the head it, but it cannot be this identity which triggers RELATIVIZATION, since if a [+HUMAN] NP were to be raised into focus position instead of a book about himself, there would be no identity of features. Also the statement that it + that becomes what must be constrained not to apply to complements, unless it is intended that it is not the head, but the it in the embedded S which has been frontshifted.

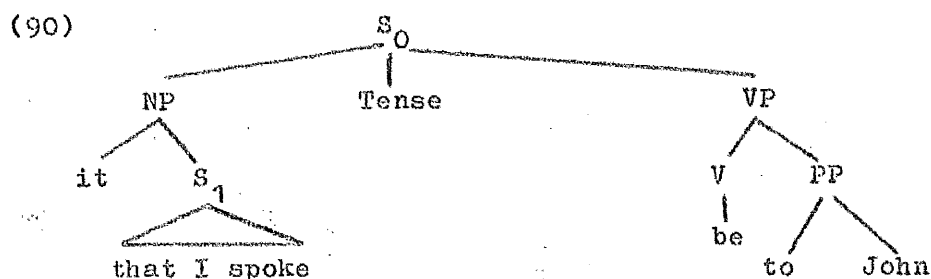
2.10 Focus-Raising II: Emonds (1969)

Emonds (1969) does not deal with pseudo-clefts in any detail, but instead proposes that cleft sentences might be derived from structures like those proposed by Chomsky for pseudo-clefts. i.e. in the derivation of (88).

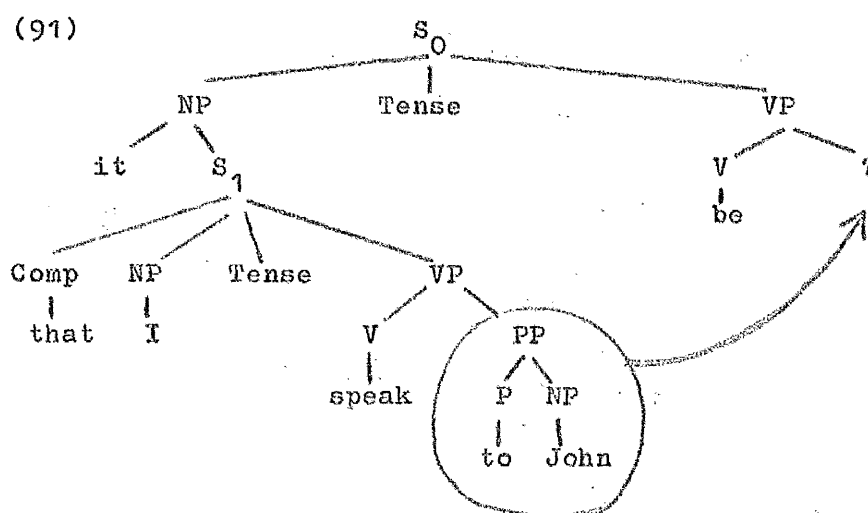
(88) it was a book about himself $\left\{ \begin{array}{l} \text{that} \\ \text{which} \end{array} \right\}$ John read
first FOCUS-PLACEMENT (my FOCUS-RAISING) applies to (81) to form (82), then RELATIVIZATION applies, followed by CLEFT EXTRAPOSITION as described by Akmajian, moving $\left\{ \begin{array}{l} \text{that} \\ \text{which} \end{array} \right\}$ John read to the right.

The primary object of this derivation is to account for the following fact noted by Akmajian, which does not receive an adequate explanation in his analysis. Given the pseudo-cleft derivation, a sentence like (89) would presumably have the ~~same~~ underlying structure (90)

(89) it was to John that I spoke



But the relative clause that I spoke cannot be generated in deep structure in any natural way. However if the focus-raising approach is used, the embedded S is the well-formed I spoke to John. The PP is then moved into the higher S by FOCUS RAISING as shown in (91)²²



In this case no pronominal copy is left in S_1 ; where only John is moved a pronoun replaces it, which may be either deleted leaving the that complementizer, and either the NP or PP, or fronted to form a WH-pronoun according to Emonds' view of relativization. Hence either type of Comp may occur with NP foci, but only that with PP foci

22. According to Emonds' analysis, FOCUS PLACEMENT is a structure-preserving rule. Since the phrase structure rules generate PP following V it is this node which is filled by raised PP's. Under ~~my~~ conception, the predicate node which is filled by FOCUS RAISING in such copular sentences is NP (dominating Δ). Because of this discrepancy this node has been left unspecified in the tree (91)

(92) it was John $\left\{ \begin{array}{l} \text{to whom I spoke} \\ \text{whom I spoke to} \\ \text{that I spoke to} \end{array} \right\}$

(93) *it was to John whom I spoke

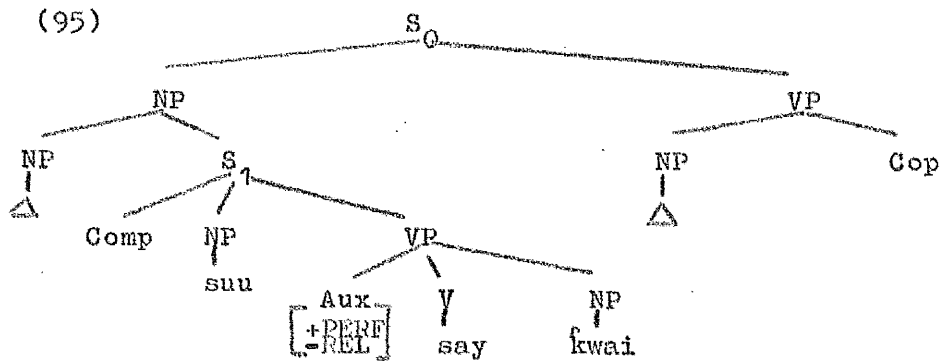
It is this type of derivation, which I shall call focus-raising henceforward. The main argument of the thesis will be in favour of this approach, since it combines the advantages of a derivation from non-emphatic sentences with the inclusion of a relative clause structure in the derivation.

2.11. Focus-Raising applied to Hausa.

Let us see how focus-raising works in Hausa. For our familiar sentence here repeated as (94), the derivation is as follows: (95) is the deep structure; FOCUS RAISING applies replacing the dummy predicate Δ with kwai, which is itself replaced by a $\left[\begin{array}{c} \text{+SPEC} \\ \text{+WH} \end{array} \right]$ pronoun, to yield the "pseudo-cleft" structure (96). On the basis of this pronoun, RELATIVE FORMATION and related transformations (which I shall call collectively RELATIVIZATION) apply placing the WH-pronoun to the left under the Comp node (97). CLEFT EXTRAPOSITION then applies moving the clause (S_1) to the right, after which the dummy subject is deleted by a general convention and COMPLEMENTIZER DELETION obligatorily applies producing the surface structure (98). Finally COPULA DELETION applies optionally to yield (99), the surface structure of the version of (94) without the copula.

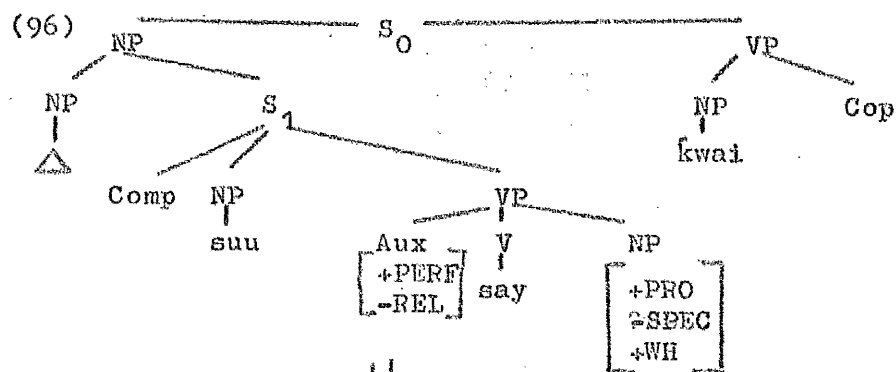
(94) kwai (nee) suka sayaa
eggs (be) they bought

(95)



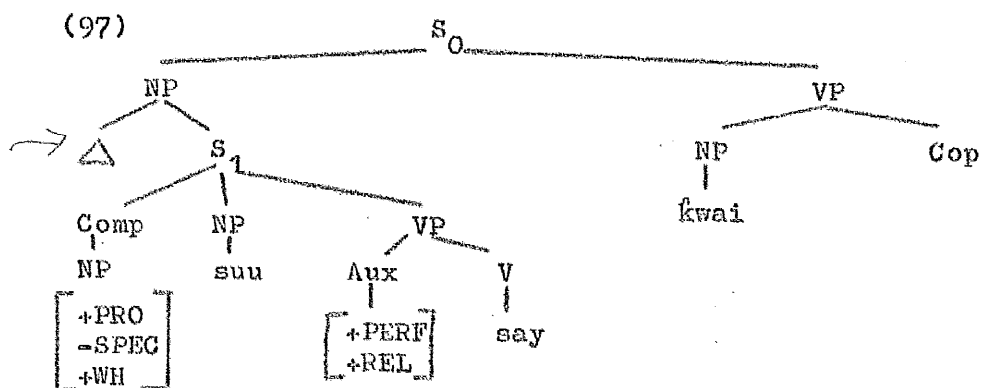
FOCUS RAISING

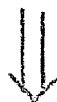
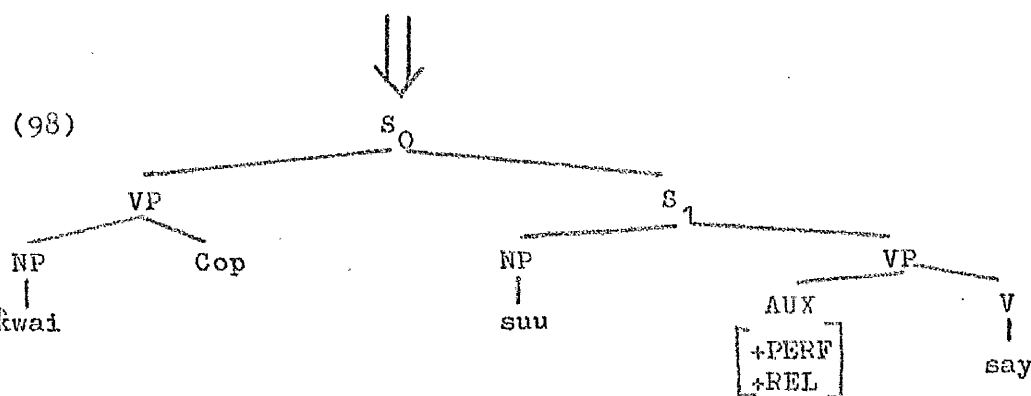
(96)



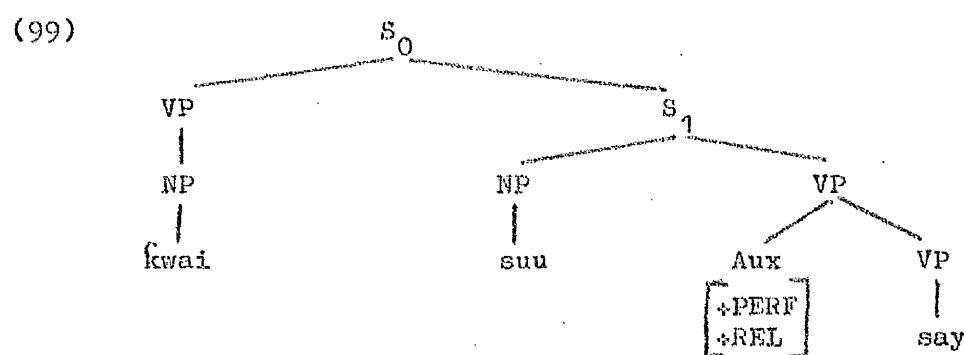
RELATIVIZATION

(97)

CLEFT EXTRAPOSITION
COMP DELETION



COP DELETION



A number of rules have of course been omitted from the preceding derivation e.g. PRO-SUBJECT DELETION and agreement rules. The derivation is in several respects different from that of Emonds. The dummy predicate is dominated by NP, and there is no it relative head in deep structure.. Also the replacement of the focus is not shii but a WH-pronoun, and consequently the relativization process is somewhat different (for details see Chapters 6 and 7).

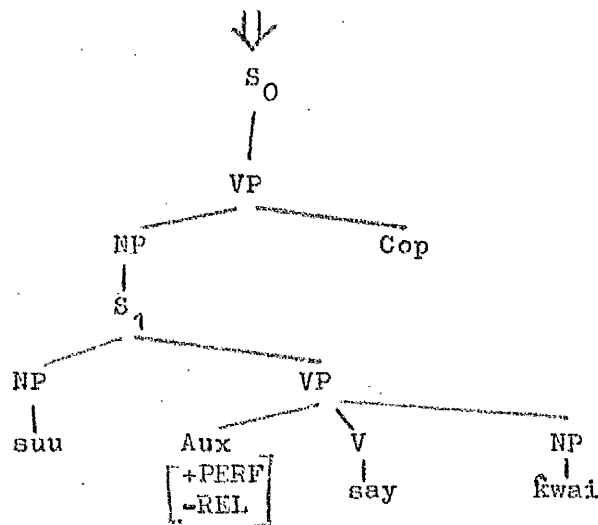
I would suggest that the S-focus sentence (100) is also derived from (95) by FOCUS-RAISING, but on this occasion the constituent raised is the whole embedded S, and again the dummy subject is deleted producing (101). Since the conditions are not met neither RELATIVIZATION nor EXTRAPOSITION can apply.

(100) sun sayi kwai nee

(101)

(95)

FOCUS - RAISING



The movement of a PP focus is fairly straightforward, but that of V (X) requires some comment. The fact that the V (X) is inserted under NP by FOCUS-RAISING provides the conditions for the creation of the verbal-noun form which verbal elements invariably take when they act as focus; in this respect focus-raising is superior to focus-fronting. But any verbal element must be replaced by yii + a

[-SPEC
+ WH] pronoun when raised in order to provide the conditions for RELATIVIZATION²³. There seem to be two ways of handling this:

(i) to state that it is always VP which is raised, never a part of VP. Usually a PRO - V + PRO - NP is substituted in the clause (VP-focus) but sometimes the full form of the object is retained in the clause, and this deletes the object in the raised VP by identity. However, the pro-form of VP is still the same, so the pro-object NP is inserted

23. I do not provide an adequate characterization of the nature of the verbal elements which can be focalized in Hausa in this thesis. Neither {VP} nor V (X) (interpreted as a linear sub-string) is correct. For instance a verb and its direct object may be moved, stranding the indirect object, as in (R)

(R) karanta littaaɓin ya yi wa yaaronsa
read the book he did to his boy

Also there are restrictions which I do not understand on the verbs which may be focalized leaving a quasi-indirect object in the clause. I do not think the objects which may follow yi wa in such constructions can be described as underlying "datives". One but certainly not the only restriction seems to be that the verbs replaced in this way cannot be verbs of creation or, in other words the quasi-indirect object must be interpreted as something which is in existence prior to the action to which the verb refers e.g.

(S) ?? rubutaawaa (nee) na yi wa wasiikaa
writing (be) I did to a letter

This seems to be a semantic constraint of a general kind, rather than a syntactic condition on FOCUS-RAISING.

following the original object, producing PRO - V + original NP + PRO - NP. Since there are now two objects following the verb yii, which is marked with the rule feature $\left[\begin{smallmatrix} + \\ \text{WA-INSERTION} \end{smallmatrix} \right]$, WA-INSERTION Chomsky adjoins wa to yii, to form the quasi-indirect object.

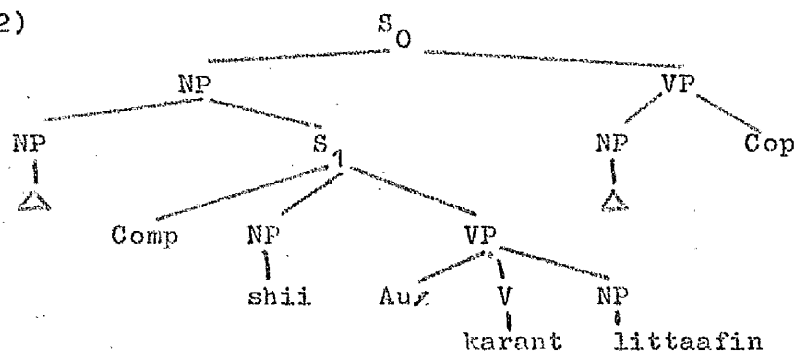
(ii) to state that V or any proper constituent of VP up to and including VP (i.e. V (X)), may be raised. In this case any of these elements must have the same pro-form as VP, PRO - V + PRO - NP, so that the derivation may continue as in (i) to produce the quasi-indirect object. But while this is natural for VP, since it has the typical form V + NP, it is difficult to justify for V(X) where (X) may be null. But since (i) posits an exception to the FOCUS-RAISING rule that in Hausa all raised elements are reduced to pro-forms, and adds an ad-hoc deletion rule, (ii) is used in this thesis. An analogous process is used in the derivation of "copying" nominalization where it is not the full VP which is frontshifted (see Chapter 5, Section 4).

Consider the derivation of (87), (repeated here for convenience).

- (87) karantaawaa (nee) ya yi wa littaaafin
reading (be) he did to the book

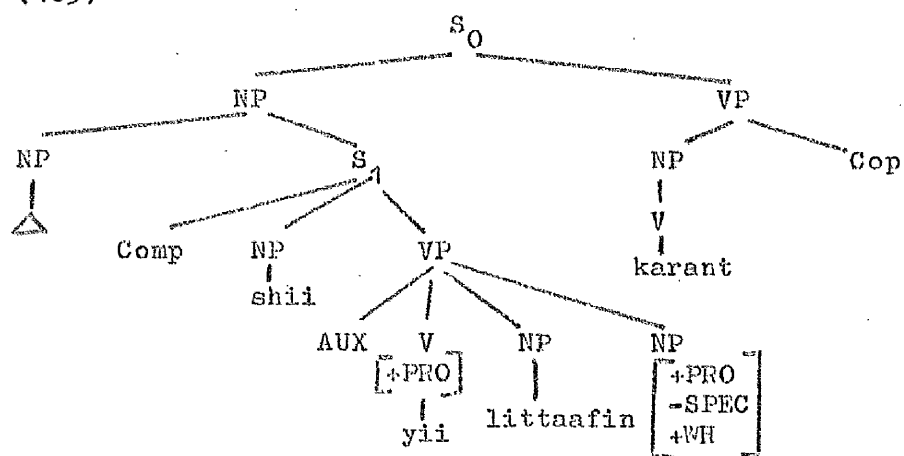
Starting from the deep-structure (102), the V karant - is raised leaving yi $\left[\begin{smallmatrix} + \text{PRO} \\ - \text{SPEC} \\ + \text{WH} \end{smallmatrix} \right]$ in S_1 . (103) WA-INSERTION then operates in S_1 to yield (104). RELATIVIZATION then applies to the subject giving (105). Finally CLEFT EXTRAPOSITION and COMP-DELETION apply followed by VERBAL NOUN FORMATION which adds the suffix -waa to the verb since it is immediately dominated by NP, to produce (106).

(102)



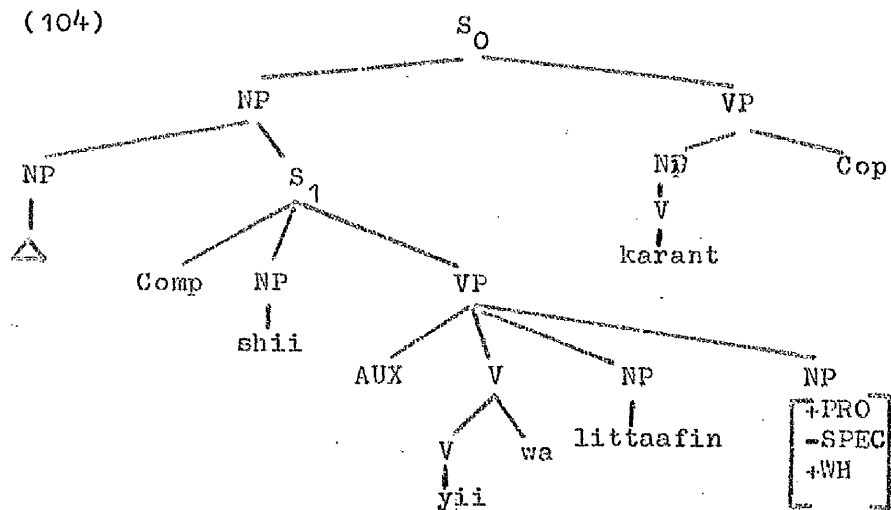
FOCUS-RAISING

(103)

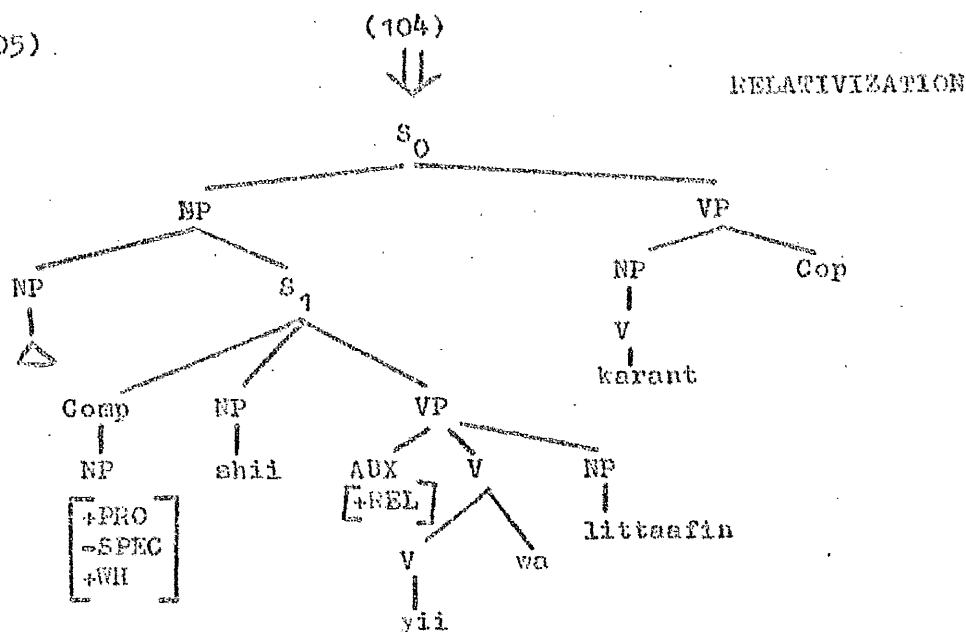


WA-INSERTION

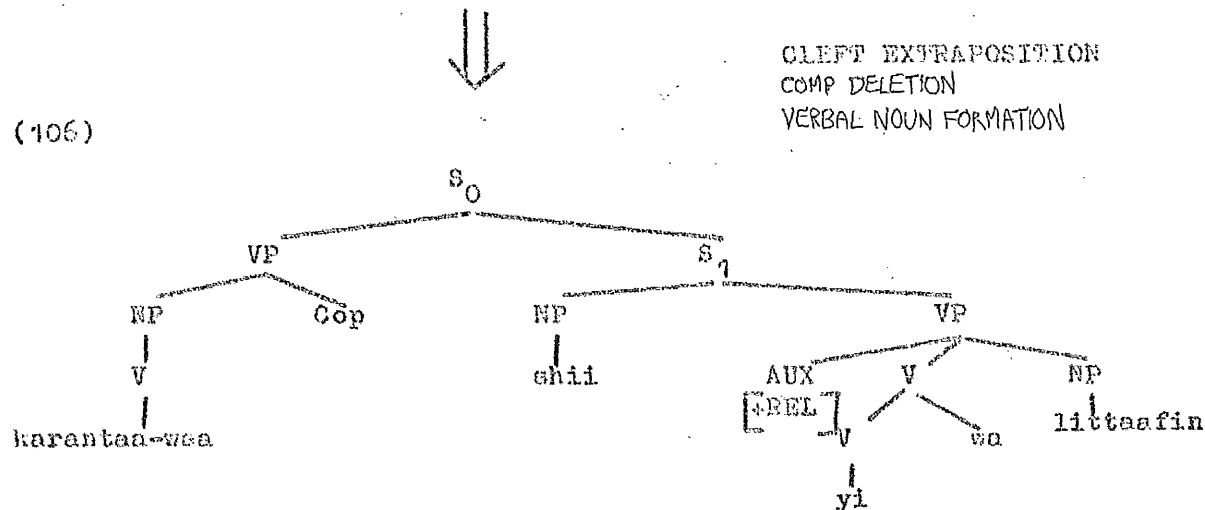
(104)



(105)



(106)



2.12. The Argument.

My procedure in arguing about the alternative analyses of focus- emphasis as applied to Hausa will be as follows. I exclude static-order analyses from the outset for the reasons adduced in Section 4 of this Chapter. In Part II, which follows this Chapter, I present a number of arguments against the pseudo-cleft analysis. Most of these take the form of an argument that there are facts in Hausa syntax which can only be adequately explained if the underlying

structure of a focus emphatic sentence contains that of the corresponding non-emphatic sentence in full including that element which is the focus in the surface structure of the emphatic sentence. The pseudo-cleft structure does not contain such a sentence and is therefore to be rejected. The evidence is drawn from data about Auxiliary Agreement (Chapter 3), the interaction of CLEFT EXTRAPOSITION and extraposition of relative clauses (Chapter 4) and Pronominalization and Reflexivization, in focus-emphatic sentences (Chapter 5). At the same time I show how the concept of the cyclical application of rules can explain these data in a simple way: this can also be taken as an indirect argument for a complex deep-structure for focus-emphatic sentences i.e. for focus-raising as against focus-fronting.

Furthermore, I argue in particular against Bagari's conception of the pseudo-cleft derivation in which emphasis in verbal and copular sentences is brought about by the same rule. (3.10 and 5.9) This is a separate issue from the pseudo-cleft derivation as such, since Bagari's idea of inversion of the subject and predicate could be incorporated into focus-raising instead of Akmajian's CLEFT EXTRAPOSITION. By rejecting this, it becomes necessary to establish a different rule (PREDICATE EMPHASIS) for copular sentences.

In Part III, I argue for the focus-raising analysis against the focus-fronting analysis, and since both of these do propose underlying structures for emphatic sentences containing the non-emphatic sentences corresponding to them, the grounds of argument are different ^{from} those of Part II. In Chapter 6, I first examine the complex deep structure which focus-raising proposes, and show its advantages as compared to the simple deep structure of focus-fronting by reference to further data about pronominalization and reflexivation

17

Then I show how the process by which the headless structure of the subject embedded S takes on a relative clause form in focus-raising is not confined to focus-emphatic (cleft) sentences but is manifested elsewhere in Hausa grammar. In Chapter 7, I show that the behaviour of relative clauses and focus-emphatic clauses is identical with respect to modal features and anaphora, and point to the fact that while this is automatically explained by focus-raising, focus-fronting encounters difficulties in stating an equivalent generalization. Finally in Chapter 8, I describe how the intermediate pseudo-cleft structure created by Relativization can be related to surface structure focus-emphatic sentences by transformational rules. Particular stress is laid on the generality of COPULA DELETION. This argument for the existence of a copula in the deep structure of focus-emphatic sentences supports the focus-raising derivation from a deep structure which has the form of a copular sentence. Chapter 9 sets out the major conclusions of the thesis and is followed by two Appendices dealing with the Phrase-Structure Rules and the Transformational Rules which have been arrived at in the course of developing the above arguments.

PART II

CHAPTER 3

AGREEMENT

3.1. Patterns of Agreement.

In Akmajian's paper "On Deriving Cleft Sentences from Pseudo-Cleft Sentences" (1970) most of the evidence presented is about agreement in cleft sentences in English. This evidence purports to lend support to the claim that clefts have ^{an} underlying pseudo-cleft structure. Although Akmajian concedes that the pseudo-cleft structure may not be the ultimate deep structure of cleft sentences, it seems that in his view it is the pseudo-cleft stage and succeeding transformations which are relevant to the explanation of the facts of agreement at least. But in order to explain these facts, he is forced to introduce into the grammar a number of "surface structure correction rules," the formal status and conditions of application of which are not made clear. The need for this additional apparatus casts considerable doubt on the idea that the facts of agreement can be construed as evidence in support of the pseudo-cleft analysis. My aim in this chapter is to show that even in English these facts can be handled more simply by reference to the focus-placement analysis, proposed by Chomsky (1970) and Emonds (1969), although some outstanding problems still remain. In Hausa, I show that the facts of agreement are even less amenable to the pseudo-cleft analysis than in English.

Languages can be broadly differentiated according to the way agreement is patterned in focus-emphatic sentences. Where the focus is equated with the subject of the clause, the person agreements of the verb, auxiliary etc. in the clause tend to be either (a) with the focus, or (b) uniformly third person¹. Similarly, pronouns

1. Such agreement phenomena need not be confined to person alone. It happens that in English the verb of the clause agrees with the focus in number, and in Hausa the Auxiliary agrees with the focus in gender and number. It may be that languages exist in which this is not the case.

coreferential to the focus agree with the focus in person in (a)-type, and are third person in (b)-type. As far as these criteria go, Hausa and Fula are typical examples of (a) and (b) respectively². Where case is relevant, in type (a), the focus NP tends to take the case-marking appropriate to the grammatical function of the NP in the clause with which it is equated, whereas in type (b) it tends to take the form appropriate to an equational predicate. Many languages are a combination of types (a) and (b). In English there is a wide range of dialectal variation in this area, the dialects exhibiting features of (a) or (b), or both.

3.2. Agreement and Case Marking in Cleft Sentences in English.

In what Akmajian calls Dialect I in English there is type (b) agreement throughout as in (1)

- (1) it is me who is responsible

This pattern of agreement can be clearly related to an underlying pseudo-cleft (2): is in the clause agrees with the third-person subject of the subject relative clause, me is accusative since it follows the verb.

- (2) the one who is responsible is me

However in addition to this there is a Dialect III which has sentences like (3); and a further Dialect II which has (4) and (5), (with which I am not familiar).

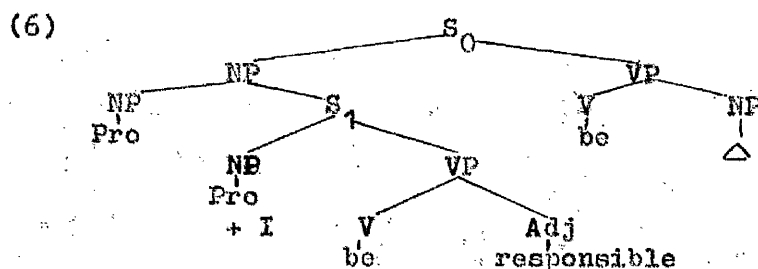
- (3) it is I who am responsible
 (4) it is I who is responsible
 (5) it is me who(m) you will blame

These dialects are difficult to explain for Akmajian since their

2. Focus emphatic sentences in Fula have a relativizer in surface structure where the focus is equated with the subject, but may have an it-like element preceding the focus, i.e. they are more like English clefts. Whether this is related to agreement I cannot tell. (Arnott 1970)

agreement and case marking pattern differ from that of the pseudo-cleft. Akmajian's solution is, for Dialect II, to introduce "a more complicated rule based on a surface generalization concerning surface subjects in a clause". What this generalization may be is not clarified. Dialect III has, in addition, "a low level rule which changes the marking on the verb of the clause so that it agrees with the focus pronoun", supposedly on the analogy of appositive clauses. In order to make this work, he has to set up Dialect III so that there is a choice between I and me in (3), and append a condition to the above rule so that it operates only when the focus is nominative³.

Contrast this with the situation if, instead of taking the pseudo-cleft (2) as the deep structure, the structure (6) is adopted, and the intermediate pseudo-cleft structure produced by raising the focus (I/me) into the higher VP by a transformation (FOCUS RAISING).



In Dialect I, both VERBAL AGREEMENT and CASE MARKING Apply after FOCUS RAISING. The verb takes the third person form in agreement

3. This raises the question of how one defines a dialect, which cannot be gone into here. Relying on my own judgements of British English (and admitting that the situation may be different in America), I should say that (1) and (3) represent different dialects. This is not altered by the fact that an individual speaker may say both and be uncertain as to which is "correct". To say that there is a choice in a dialect such that one dialect partially collapses into another, and then to make further rules depend on this choice seems to me to be confusing the issue.

with the third person pronoun which replaces the first person pronoun as the subject of S_1 , and the raised first person pronoun takes the form me as it is post-verbal in S_0 . But now Dialect III can also be explained by saying that VERBAL AGREEMENT and CASE MARKING here apply before FOCUS RAISING. Since the first-person pronoun is still the subject of S_1 at the time VERBAL AGREEMENT applies, be takes the form am, and since it is still subject of S_1 at the time CASE MARKING applies, it takes the nominative form I, and remains in that form when raised. Dialect II now appears as the intermediate case: CASE MARKING precedes, and VERBAL AGREEMENT follows FOCUS RAISING. The data have been accounted for simply by a differential ordering of agreement rules with respect to FOCUS RAISING. The historical change from Dialect III to Dialect I (in some cases passing through Dialect II) now seems to be an example of the familiar process of the reordering of rules⁴.

(7)

III CASE MARKING	becomes II CASE MARKING	becomes I FOCUS RAISING
VERBAL AGREEMENT	FOCUS RAISING	CASE MARKING
FOCUS RAISING	VERBAL AGREEMENT	VERBAL AGREEMENT

3.3. Reflexive Pronouns in Cleft Sentences in English.

Akmajian's second piece of evidence concerns reflexives in the clause coreferential to the focus NP which is equated with another NP in the clause (the subject, in all examples used). As with Dialect I above, his approach can explain the sentences, like (8), in which

4. The ordering of CASE MARKING before VERBAL AGREEMENT here is dictated by the facts of Dialect II. Conversely, independent justification of this ordering would strengthen the case for this analysis; but this lies beyond the scope of our discussion. This ordering also predicts the ungrammaticality of (1) in all dialects where it holds good

(A) * it is me who am responsible

The first person reflexive in (10) is easily explained by the focus-placement approach, if REFLEXIVIZATION precedes FOCUS RAISING since the subject and object originate as coreferential NP's within the same S, in a structure like (13)

(13) $\left[\begin{array}{c} S \\ \left[\begin{array}{c} NP \\ \left[\begin{array}{c} PRO \\ S \left[\begin{array}{c} I \text{ cut myself} \end{array} \right]_S \end{array} \right]_NP \end{array} \right]_S \end{array} \right]_S \text{ be } \Delta \end{array}$

The problem for this approach is with sentences with third person reflexives, like (8). Even if REFLEXIVIZATION followed FOCUS RAISING, in order to generate a third person reflexive in the clause, the underlying object of the clause would have to be third person too,

i.e. (14) $\left[\begin{array}{c} S \\ \left[\begin{array}{c} NP \\ \left[\begin{array}{c} PRO \\ S \left[\begin{array}{c} I \text{ cut him} \end{array} \right]_S \end{array} \right]_NP \end{array} \right]_S \end{array} \right]_S \text{ be } \Delta \end{array}$

But this is obviously the deep structure of (15), not of (8)

(15) it was me that cut him

Nor is the problem confined to reflexives; it is found in the distinction between third and other persons in ordinary pronouns in the two versions of (16); and I think also in the choice of full NP or pronoun in (17).

(16) it was me who said $\left\{ \begin{array}{l} (a) \text{ he} \\ (b) \text{ I} \end{array} \right\}$ would be late

(17) it was John who said $\left\{ \begin{array}{l} (a) \text{ John} \\ (b) \text{ he} \end{array} \right\}$ would be late

Now if it is admitted that such pairs have different presuppositions, it is still not necessary to follow Akmajian in deriving them from different pseudo-clefts. It is conceivable that one member of each pair ((10), (16)(b) and (17)(b)) is derived by FOCUS RAISING, and the other member from a pseudo-cleft deep structure ((8), (16)(a) and (17)(a)). We know that the pseudo-cleft sentence in surface structure is itself derived from a pseudo-cleft deep structure, not by FOCUS RAISING since its agreement patterns always reflect its surface structure configuration. Further it would seem

a fairly natural consequence of a historical development like that shown in (7) that FOCUS RAISING begins to be lost, and a new post-raising deep structure comes into being. The point being made here against Akmajian is that this process is by no means completed in English⁶.

3.4. Agreement in Focus- Emphatic Sentences in Hausa.

The pseudo-cleft analysis is even more unsatisfactory in dealing with Hausa. Since it is a type-(a) language in all dialects, various "correction rules" would be needed in the grammar of the language as a whole to make elements in the clause agree with the focus. For instance there is a rule in Hausa whereby the Aux agrees in person, gender and number with the subject NP; I call this AUX AGREEMENT. Now where the focus NP is equated with a subject in the clause, the Aux always agrees in all the above features with the focus; e.g.

- (18) nii (nee) zá-h taimakee ka
 me (be) FUT + $\begin{matrix} \text{PRO} \\ + \text{I} \end{matrix}$ help you i.e. it's me who will help you
- (19) *nii (nee) $\left\{ \begin{matrix} \text{zá-l} \\ \text{záa-ta} \end{matrix} \right\}$ taimakee ka
 me (be) FUT + $\begin{matrix} \text{PRO} \\ +\text{III} \\ \{-\text{FEM}\} \\ \{+\text{FEM}\} \end{matrix}$ help you

To substantiate the derivation of (18) from the pseudo-cleft (20), one would have to claim that there is a rule which harmonizes the person of Aux in the clause with the focus NP just in case the focus is equated with the subject of the S in which Aux occurs.

6. I assume that a similar type of restructuring takes place in syntax as in phonology; see King (1969) page 46. A full treatment of this question would probably require a revision in the present theory of pronouns and reference. See note 9.

- (20) { wan-da zá-i } taimakee ka nii nee
 { wad-da záa-ta }
 the one who will { -FEM } help you me be
 { +FEM }

Note, too, that such a rule cannot operate at surface structure in Hausa in the same way as Akmajian's rule in English, i.e. conditioned by the absence of a surface subject in the clause, since all pronominal subjects are deleted in Hausa. Naturally one would not want a rule which changes (21) into (22), which has a completely different meaning.

- (21) Kai (nee) zá-n taimakaa
 you (be) I will help i.e. it's you who I will help
 (22) Kai (nee) záa-ka taimakaa?
 you (be) you will help i.e. it's you who will help

Such a correction rule would not only be of dubious formal status, but also its conditions of application would probably be very complex.

In contrast, the generalization can be stated straightforwardly using FOCUS RAISING. The deep structure of (18) would be something like (23)

- (23) $\left[\begin{array}{c} S_0 \\ \left[\begin{array}{c} NP \\ \left[\begin{array}{c} S_1 \\ \text{nii} \end{array} \right] \end{array} \right] \end{array} \right] \text{Aux} + \text{FUT} \text{ taimak kai } \left[\begin{array}{c} S_1 \\ \left[\begin{array}{c} NP \\ \text{nee} \end{array} \right] \end{array} \right] \end{array} \right] \Delta$

AUX AGREEMENT would apply first adding the first person marker

(n) to the Aux; only then would FOCUS RAISING remove nii from subject position. This ordering is automatic if AUX AGREEMENT is a cyclic rule. In Chapter 7, Section 14, this is shown to be so. In the focus-fronting approach of Schachter AUX AGREEMENT would precede FOCUS FRONTING on the same cycle.

2.5. Reflexive Pronouns in Focus-Empathic Sentences in Hausa.

In Hausa, as in English, an NP which is coreferential to a

7. Taimakaa here would have to have the tone pattern H - L - H, since it is intransitive: in (21) it is transitive and is L - H - L.

In order to make (28) a plausible deep structure for (27), an extra "correction rule" is necessary which changes the person of the reflexive pronoun to that of the focus. Such a correction would have to be extended to cover all pronouns in the clause coreferential to the focus, since person agreement with the focus is obligatory:

- (29) kee cee suka cee $\left\{ \begin{array}{l} *zaa \text{ ta} \\ zaa \text{ ki} \end{array} \right\}$ Zoo
 you (fem.sing) be they said $\left\{ \begin{array}{l} *she \\ you \end{array} \right\}$ will come

These agreements are explained by the focus-placement analyses if REFLEXIVIZATION and PRONOMINALIZATION precede the focus-placement rule, so that the antecedent coreferential NP of the same person is still within the clause, so that the transformations can apply. In the FOCUS RAISING approach, this ordering is once again guaranteed by the cycle (see Chapter 4 for further justification).

3.6. Non-Reflexive Pronouns

A problem for both the pseudo-cleft and focus-raising analyses discussed is that raised by the fact that deletion of elements coreferential to the focus as a result of RELATIVIZATION takes place under certain conditions (see Chapter 7) as in (30); but where PRONOMINALIZATION applies instead, as in (31), the pronoun agrees with the focus in person.

- (30) nii (nee) zaa-ka taimakaa
 me (be) you will help
 (31) nii (nee) zaa-ka saadu da nii
 me (be) you will meet with me

For the pseudo cleft analysis, a "correction rule" is again needed to account for nii in (31). For Schachter's focus-fronting proposal the problem can be simply accounted for by deletion of the right hand identical element which results from fronting in (30), and the application of PRONOMINALIZATION in (31), which is vacuous in this case.

For focus raising, however, FOCUS RAISING applies before RELATIVIZATION and it seems most likely that a 3rd person PRO-element replaces the raised focus, so that nif remains unexplained. One possible solution is that the replacement pronoun retains the person features of the focus as well as its number and gender features. Alternatively, one could regard person features not as inherent, but as added by transformation to undifferentiated PRO elements⁹. The difference between type (a) and (b) languages would then partially depend on whether PERSON-MARKING precedes or follows FOCUS RAISING.

3.7. Agreement of the Copula in Focus-Emphatic sentences: NP:Focus

The other major element to which agreement rules apply in focus-emphatics is the copula outside the clause associated with the focus. In English clefts be agrees in number and person with the it which precedes it in surface structure, but it appears also to obey tense-sequence rules which may operate at a deeper level. In the majority of cases in Hausa, nee/cee agrees in number and gender with the focus NP which precedes it. As such it is following the copula agreement rule as formulated by Parsons. (Parsons 1964): that the copula agrees with the first NP in its sentence, i.e. with the subject if it is present, and with the predicate NP if the subject NP is absent, as it is in surface structure in Hausa focus-emphatic

9. To apply generally, this would require the acceptance of higher performative predicates, which do not form part of the framework of the present work, although one could argue that the complementizer ceewaa is a manifestation of an underlying performative. See Ross "On Declarative Sentences" (1967/70)

sentences¹⁰. This rule applies to all lexical focus NP's as in (32), i.e. those which are not derived.

(32) { zaakii nee
zaakanyaa cee } muka harbaa
zaakookii nee

it was { a lion
a lioness
lions } that we shot

3.8. Apparent Irregularities in Agreement with Adverbials

According to the pseudo-cleft and focus-raising analyses, all focus elements are dominated by NP, because they fill the predicate position in an equational copular S. But where these elements are not underlying NP's, but e.g. PP's, Adverbial S (which are themselves treated as underlying PP's here), etc. the copula always takes the unmarked [-FEM] form nee.

(33) { tun daga can
bayan da suka fita } nee muka saamoo abinci

it was { right from there
after they went out } that we got the food

Now apart from these, there are a number of cases of foci

10. This oversimplifies the situation in Hausa with regard to COPULA AGREEMENT. In the dialect studied by Schachter, whether the copula agrees with the subject or predicate NP is dependent on whether the subject NP is specific or non-specific (actually, his examples of non-specific NP's are all generic). I have found two further distinct patterns of agreement among Kano speakers, and although it does seem that specificity or the constant/variable dichotomy discussed in Chapter 6, (Section 6) has some bearing on agreement in them too, I can find no interesting formalization of these facts which would illuminate the relationship between dialects. One of the problems is that the tendency towards the loss of gender agreement in a number of Hausa dialects, which seems to make some speakers of other dialects rather uncertain in their judgements in this area. "Attraction" of the agreement of a complex NP to that of its final NP rather than its head is also fairly common. A number of types of anomalous agreement including some discussed here are dealt with in Parsons (1964).

which appear to be feminine NP's in surface structure, but nevertheless take nee. These are NP's/in a locative sense, as in (34), temporally (and some other) adverbial nouns, as in (36), adverbial nouns of state derived from verbs, as in (38), NP's of destination, as in (40), and verbal nouns, as in (41); (35), (37), (39) and (42) illustrate that these elements all take feminine agreements, (i.e. taa, ta) when they act as subject NP's.

- (34) Kanoo nee muka sauka
it was (at) Kano that we stopped
- (35) Kanoo taa fi Katsina yawan mutannee
Kano exceeds Katsina in population
- (36) goobe nee zaa mu sauka Kanoo
it is tomorrow that we shall stop at Kano
- (37) goobe taa fi yau muhimmanci
tomorrow exceeds today in importance
- (38) zaune nee mu ke
it is seated we are
- (39) zaune taa fi tsaye daadi
sitting exceeds standing (in) pleasure
- (40) Kanoo nee muka tafi
it was (to) Kano that we went
(for subject NP use see (35))
- (41) matsaawaa nee ya yi mini
it was pressing he did to me
- (42) matsaawaa ta kan saa fadaa
pressing sometimes causes a fight

Now in (34), (36) and (38) it is clear that the focus elements, although they may have the same surface forms as the NP in the sentences which follow them, are adverbial rather than nominal. In fact in all these cases, the NP may be preceded by the locative preposition a (a Kanoo, a goobe, a zaune)¹¹. It can therefore be stated that all these are underlying NP's to which the optional transformation A-DELETION has

11. The retention of a in focus position is preferred for examples like a Kano, and a zaune; a goobe is grammatical but unusual in all positions. da may also be deleted under certain circumstances.

applied hence the [-FEM] agreement required by PP's.

In (40), Kanoo is obviously adverbial rather than nominal too; verbs do not take the forms appropriate to a following object NP where a "destination object" follows them.¹² But a cannot be present in standard Hausa.

(43) * a Kanoo nee muka tafi

The grammaticality of this sentence in southern dialects of Hausa does show however that A-DELETION is probably at work here too, but that it is obligatory following verbs of motion in most dialects.

3.9. The Problem of the Agreement of Verbal Nouns

Having disposed of the apparent irregularity of agreement of adverbials, we are faced with the more serious

12. e.g. (E) muɲaa kutsaawaɲ unguwarsu
we are pushing into their quarter.

(F) *muɲaa kutsaa unguwarsu

For NP-object and no-NP-object ^{forms} see Chapter 4, Section 1.

problem of the verbal nouns¹³. In the pseudo cleft analysis proposed by Bagari, focus emphasis in verbal and copular sentences is produced by the same transformation which switches the order of subject and VP in copular S. This would predict that a verbal noun focus would take the same agreement in either type. But while the copula takes [-FEM] agreement in (41), it has feminine agreement in the emphatic copular S (44).

(44) matsaawaa cee abin da mu kee bukaataa yanzu
 pressing be what we need now

Here agreement follows the general rule proposed earlier. Hence Bagari's analysis cannot help us with (41).

On the other hand, Akmajian's version of the pseudo-cleft analysis does offer a possible solution. If, as he proposes, focus-

13. The example used here is a "weak" verbal noun (Parsons) (i.e. one formed with the suffix -waa just in case there is no following object) since the facts are clearest with these. The "strong" verbal nouns of feminine gender (those with -aa suffixed to a stem related to, but not always identical to, the verb stem, and which take a -r genitive linker where an object follows) also behave generally in the same way, but this is difficult to determine since such strong verbal nouns are often derived nominals, i.e. lexical items, which occur in the construction yi + verbal noun. Where the verbal noun is focus, this type appears identical to the type in which the verbal noun is derived by FOCUS RAISING from the simple verb. Thus we get either masculine or feminine agreement with such verbal noun foci.

(G) Guntarsa {nee} muka yi
 {cee}
 cheating him be we did

These data tend to confirm Bagari's view of strong verbal nouns in the sense that they show that a large number of them are lexically, not transformationally derived; on the other hand, they show that there is no isomorphism between the morphological class "strong" and lexical derivation, as in our analysis masculine agreement indicates transformational derivation.

As a matter of fact, the source of such sentences is often clear irrespective of the gender of copula. For instance (H) must be derived from (I) since the verb saakaa cannot occur without a direct object.

(H) saakaa muka yi
 weaving we did

(I) mun yi saakaa
 we did weaving

(J) *mun saakaa
 we weaved

Moreover, some speakers feel the variation in (G) to be a result of free variation, rather than a principled distinction. Others still have feminine agreement in all cases.

emphasis in verbal sentences results from the EXTRAPOSITION of S, we could say that COPULA AGREEMENT applies before either EXTRAPOSITION or IT-DELETION (if the existence of an it-element is posited in Hausa)¹⁴. One could then argue that agreement is with the [-FEM] subject while it is still in the initial position. Some support for this ordering of rules can be drawn from the fact that in sentences of the form Feminine Predicate NP - Copula - Complement S, which are also derived by EXTRAPOSITION from sentences of the form

NP [S] NP - NP [+FEM] - Cop,
the agreement of the copula is [-FEM] as in (45). For further details of COMPLEMENT EXTRAPOSITION, see Chapter 4 Section 1, and Chapter 8 Section 1).

- (45) { gaskiyaa
 Raryaa
 tillaa } { *cee
 nee } sun shaa giyaa
- { truth
 lie
 certainty } be they have drunk beer

This is most easily explained by ordering COPULA AGREEMENT before EXTRAPOSITION (or IT-DELETION), since NP [S] NP controls -FEM agreement.

However, despite this argument, there is still no explanation of the reason why verbal nouns and other NP's differ in their agreement. If COPULAR AGREEMENT precedes EXTRAPOSITION, one would expect all copulas to be nee in agreement with a [-FEM] subject. As an alternative one could say that the copula agrees with the focus in

14. Akmajian posits and underlying it in English
I do not take this option in the present work see
Chapter 2 Section 7.

in all cases, but that feminine verbal nouns are derived from verbs and that COP AGREEMENT takes place before the rules which makes the verbal noun feminine, which may apply at the same time as the rules which change the shape of the verb (addition of -waa suffix etc.). But note that in all other cases, with AUX AGREEMENT as in (42), and with COPULA AGREEMENT itself in (44), feminine verbal nouns takes feminine agreements.

The only way in which the above view can be made to differentiate the agreements of verbal nouns in verbal focus-emphatic sentences and elsewhere is to show that the two types of verbal nouns are derived from different sources. In the pseudo-cleft analysis there is no justification for doing this: a verbal noun in the predicate NP position of a copular S is presumably derived like any other from $NP [S]_{NP}$ by NOMINALIZATION followed where applicable by INDEFINITE SUBJECT DELETION or EQUI-NP DELETION, and various morphological rules, (for details see Chapter 5 Section 3.4). However, either of the focus-placement approaches does allow a different derivation in the case of verbal nouns in focus position. If we assume that the focus position is an NP-slot, then all the material which fills the slot will be dominated by NP. For verbal noun foci, what is moved into this position is V plus optionally some other daughters of VP. FOCUS RAISING or FOCUS FRONTING creates the configuration $NP [V X]_{NP}$, which is identical to that which is created by NOMINALIZATION, and which triggers VERBAL NOUN FORMATION. The difference is that there was no embedded S in the source. What is necessary now is to show that COPULA AGREEMENT operates before VERBAL NOUN FORMATION (including feminization) for $NP [V X]_{NP}$ and after it for $NP [S]_{NP}$. If we wish to maintain the unity of COPULA AGREEMENT, the only way out is to attribute this order to the transformational cycle. This is

possible if VERBAL NOUN FORMATION applies on the embedded S cycle in NP [S]_{NP} i.e. with non-focus verbal nouns, and the ordering of transformations on the higher cycle is COPULA AGREEMENT followed by VERBAL NOUN AGREEMENT. But given the present theory, NOMINALIZATION and VERBAL NOUN FORMATION cannot apply on the embedded S cycle since the dominating NP node is an essential part of their structural conditions, and this node is only reached on the cycle above that of the embedded S¹⁵.

3.10 A Solution in Terms of Focus Raising

The best explanation of this apparently anomalous agreement pattern is that provided by the focus-raising approach, particularly by the RELATIVE FORMATION transformation. (See Chapter 6 Section 4) When a lexical NP in a deep structure like (46), underlying (32), is moved into the copular S as in (47) the place it originally took in the embedded S is filled by a pronoun which has the same features of number and

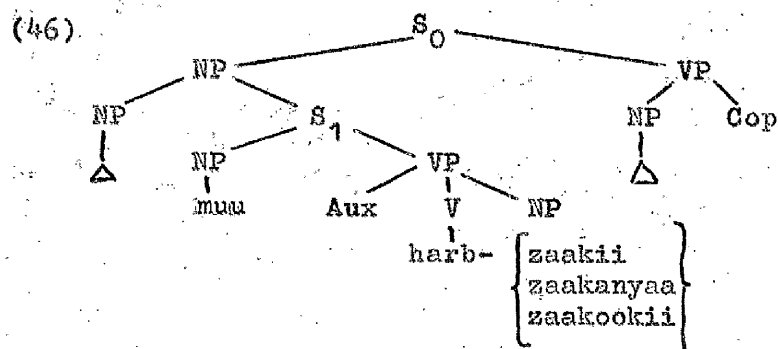
15. There are at least two changes which could be incorporated into the theory to make the preceding explanation work:

(i) include a marker, say Nom, under Comp in the embedded S which triggers NOMINALIZATION and related transformations so that they take place on the lower cycle.

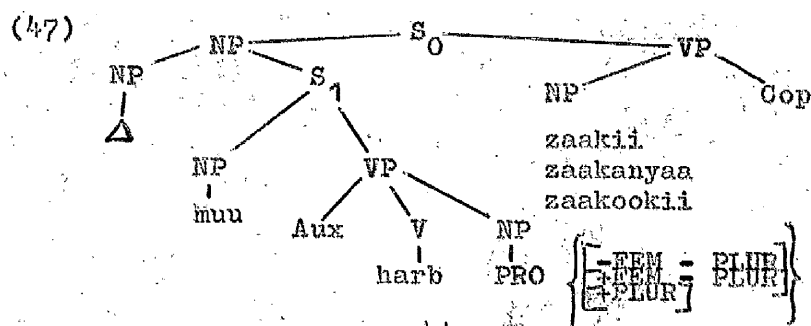
(ii) allow the cycle to operate on NP's as well as S's. This has been suggested by Chomsky (1965) and Bresnan (1971).

(i) seems an ad-hoc device to me. (ii) does not in itself solve the problem, since in the present analysis, the focus V is also dominated by NP, so that the order of both NP [S]_{NP} and NP [V X]_{NP} would be the same with regard to COPULA AGREEMENT.

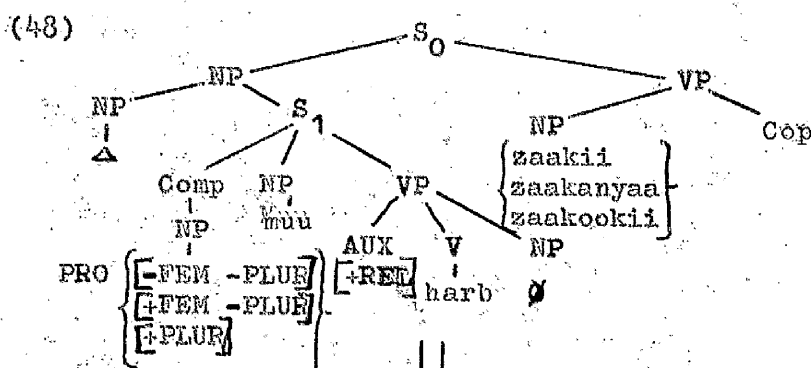
gender (? and of person) as the original NP. Now RELATIVE FORMATION applies to the subject NP, chopping or copying this pronoun into initial position, thus triggering the change in tense characteristic of a relative clause and assigning the gender of the pronoun moved to the whole clause, e.g. (48). Then COPULA AGREEMENT applies forming (49) followed by EXTRAPOSITION, COMP-DELETION and PRO-SUBJ DELETION yielding the surface structure (50). The agreement is in fact with the subject NP at the pseudo-cleft stage, but since this subject agrees with the focus NP by virtue of RELATIVE FORMATION, it appears in surface structure to be with the focus.



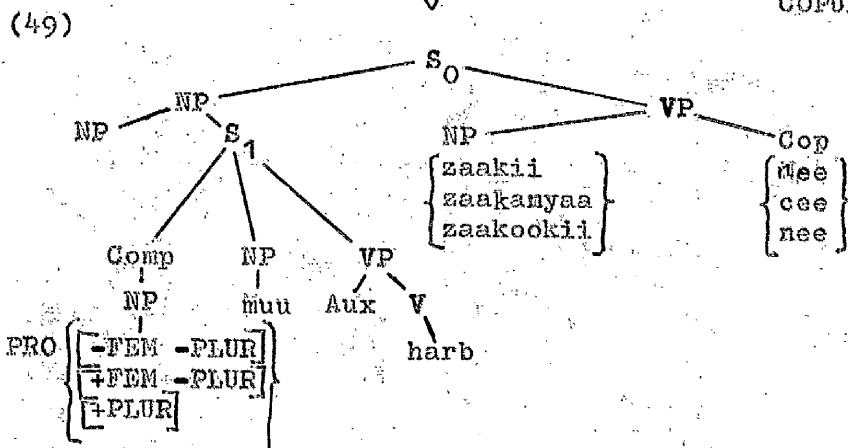
FOCUS-RAISING



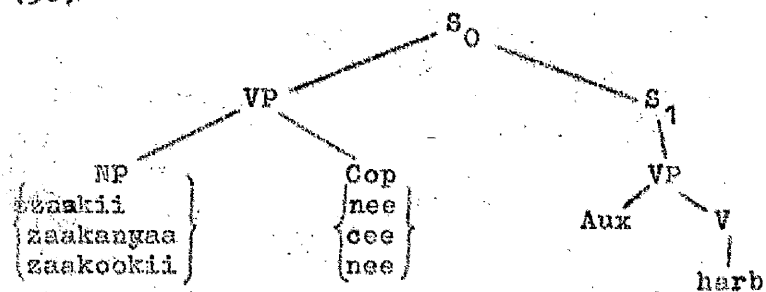
RELATIVE FORMATION



COPULA AGREEMENT



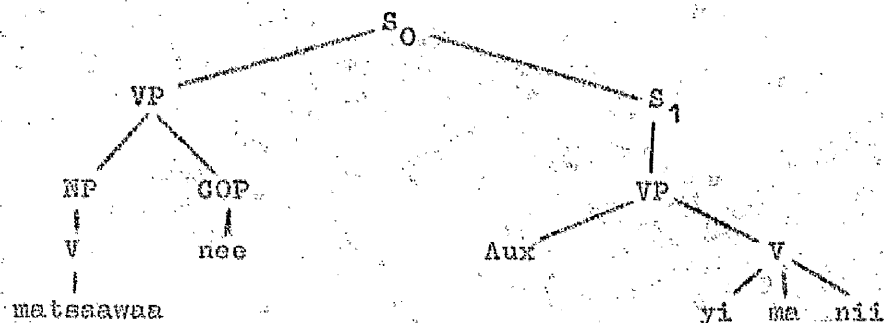
(50)

EXTRAPOSITION: COMP DELETION
PRO-SUBJECT DELETION

Now with non-NP's acting as foci, the situation is different. When they are raised, they are replaced by sub-strings of substitution (PRO-) elements appropriate to their grammatical category and RELATIVE FORMATION takes place as before. But what distinguishes these PRO-elements from those replacing lexical NP's is that they are not marked for gender and number. When they take head position in the derived relative clause they can only have the neutral feature composition $\begin{bmatrix} -FEM \\ -PLUR \end{bmatrix}$ thus COPULA AGREEMENT with the subject can only produce nee. Consider how this works with a focus verb, as in (41), illustrated by the derivation (51) - (55). First, the verb mats- is raised into focus position and replaced in S_1 by the PRO-verb yi and a PRO-second object of neutral $\begin{bmatrix} -FEM \end{bmatrix}$ gender the original direct object becoming the first object, and as such adding ma/wa, the indirect-object suffix, to yi (see Chapter 2 Section 11 for details of these rules) (52). Then RELATIVE FORMATION applies, frontshifting the new $-FEM$ PRO-object under the Comp node (53). At some point, the precise position of which is irrelevant to this derivation, the focus V dominated by NP becomes the feminine verbal noun matsaawaa. This is assumed to have taken place in tree (53). COPULA AGREEMENT then applies, COP becoming $\begin{bmatrix} -FEM \end{bmatrix}$ in agreement with the subject headless relative clause (54). Finally EXTRAPOSITION COMP-DELETION, PRONOUN CLITICIZATION and PRO-SUBJECT DELETION take place to yield the surface structure (55).

(55)

EXTRAPOSITION, COMP-DELETION,
PRONOUN CLITICIZATION,
PRO-SUBJECT DELETION



A similar solution is not possible in the pseudo-cleft analysis, since presumably the underlying structures of (32) and (41) would be something like (56) and (57) respectively. Both have [-FEM] subjects and thus cannot account for the difference in agreement in the cleft sentences.

(56) abin da muka harbaa {zaakii
 zaakiiyaa
 zaakbookii} nee
 what we shot was {a lion
 a richness
 lions}

(57) abin da ya yi mini matsaawaa nee
 what he did to me was ~~pressing~~ pressing

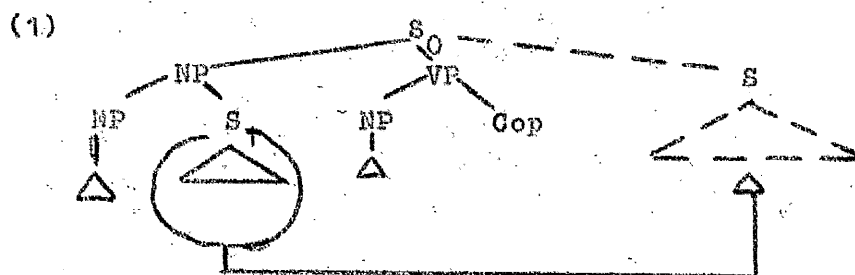
In the earlier sections (3.1 - 6), it was shown that ~~concurrent~~ pronouns and reflexives coreferential to the focus in the clause of focus-emphatic sentences in Hausa, and Aux where the focus is equated with the subject, agree with the focus in gender, number and person. This is what one would expect under a focus-placement analysis, given that the relevant agreement rules apply before the focus-placement rule, either by virtue of the cycle (focus-raising) or by their intrinsic order (focus-fronting). In contrast, the pseudo-cleft approaches of Almajan and Bagari would predict third-person agreement throughout, and could only be saved by the "correction rules" of the type introduced by Almajan, for which there is little motivation. This, combined with the conclusion arrived at above in favour of the focus-raising approach, explaining anomalous copula agreement with focus verbal-nouns, makes up the first part of my argument against the pseudo-cleft analysis.

CHAPTER 4

EXTRAPOSITION OF RELATIVE CLAUSES.4.1. Cleft and Complement Extraposition.

A number of grammatical processes have been referred to as EXTRAPOSITION by grammarians of English. All involve the movement of S to the right. So far we have encountered GLEFT EXTRAPOSITION and COMPLEMENT EXTRAPOSITION in Hausa; I wish now to introduce a third type: RELATIVE CLAUSE EXTRAPOSITION. In order to establish this as a transformation in its own right, I will compare its behaviour to the other types of EXTRAPOSITION, ^(4.1-2) and with some other grammatical processes ^(4.3-6) with which it might be confused. I will then examine its operation in focus emphatic sentences, in order to show that the pseudo-cleft analysis of such sentences is not adequate to explain this operation. ^(4.7-8)

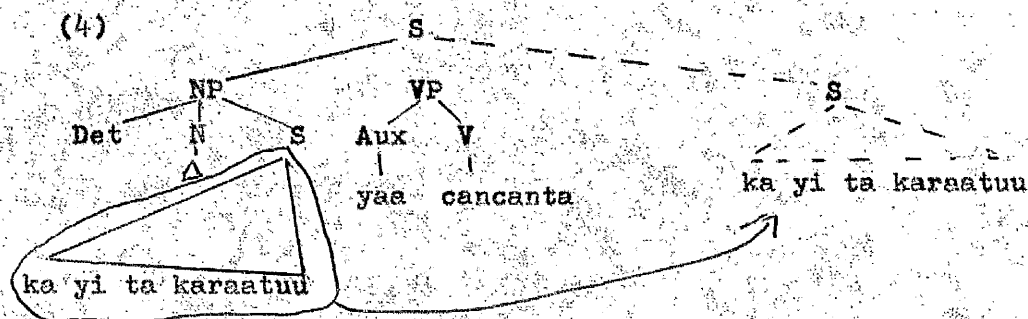
CLEFT EXTRAPOSITION is an essential part of both the pseudo-cleft and focus-raising derivations of focus-emphatic (cleft) sentences. Its application is confined to the movement of S from a headless relative clause which is the subject of a copular S and its attachment as a right-hand daughter of S, i.e. (1). There do not appear to be any restrictions on its operation. The notable feature of the clause moved is that it resembles a relative clause but there is no relative pronoun or da relativizer present. Whether this results from the application of a rule deleting a node like Comp, or the non-application of a rule inserting da is discussed elsewhere (see Chapter 3, Section 2, and Chapter 7, Section 2).



COMPLEMENT EXTRAPOSITION moves S_1 from the structure NP [Det N S] NP to the right-hand daughter position in S_0 . It may apply to subjects of copular or verbal S or objects. The head N may be a lexical item like laabaarii (story), or it may be empty. Sentence (2) is one in which the S in the original subject NP in (3), a subjunctive clause, has been moved to the right. This process is illustrated in diagram (4).

- (2) yaa cancanta ka yi ta karaatuu
it is fitting that you continue studying

- (3) ka yi ta karaatuu yaa cancanta



COMPLEMENT EXTRAPOSITION applies after AUX AGREEMENT, hence yaa acquires its [-FEM] form by agreement with the [-FEM] complement subject. Similarly COMPLEMENT EXTRAPOSITION applies after COPULA AGREEMENT, so that the copula in (5) is [-FEM] in agreement with the original subject in (6), before EXTRAPOSITION moves out the S, even though gaskiyaa is [+FEM]

- (5) gaskiyaa nee (ceewaa) sun kulla dabaaraa
it is true that they have made a plan.

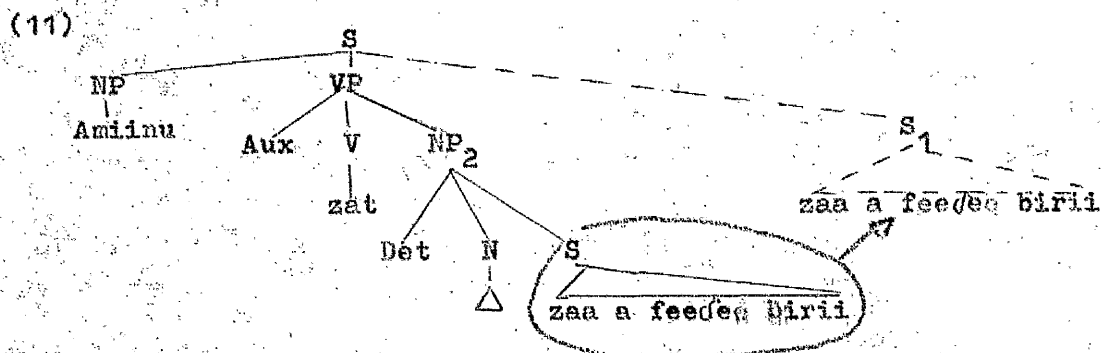
- (6) ceewaa sun kulla dabaaraa gaskiyaa nee
that they have made a plan is true

The operation of EXTRAPOSITION from objects is clearly observable, even where no change in order takes place, where the preceding verb is of a class which changes its suffix according to whether it is followed by an NP object. Such verbs include Grade 2,

13

(Parsons 1964), in which the suffix -i where an object NP follows, -aa where none follows. In Grade 7 (causative), the form has an -ar suffix where there is no NP object, but where an object NP follows the element da is interposed between the verb and the object. As for verbal nouns, where these are of the "weak" type (Parsons, 1964) the NP-object form is exactly the same as the finite verb, but where there is no NP-object, then the suffix -waa is added; "strong" verbal nouns, on the other hand, have no suffix where there is no object, but take the genitive link -n(masc.)/-t (=>r) (fem) where there is an object. In each case where a complement follows a verb, either of these forms may occur. This is explained by the optional application of EXTRAPOSITION: where it applies, S is moved and the original NP is deleted, leaving no NP-object, so that the no-NP-object form is generated; where it does not, the NP object is still in place, giving the NP object form. These optional pairs are illustrated in the following sentences for the verbal types listed above. Diagram (11) shows the effect of COMPLEMENT EXTRAPOSITION of objects on sentence (7).

- (7) Amīnu yaa $\begin{Bmatrix} \text{zataa} \\ \text{zaci} \end{Bmatrix}$ zaa a feedee birii
A. thought that one would skin the monkey.
- (8) Amīnu yaa $\begin{Bmatrix} \text{tarar} \\ \text{tarar da} \end{Bmatrix}$ zaa a feedee birii
A. found that one was going to skin the monkey.
- (9) Amīnu yaa $\begin{matrix} \text{rika} \\ \text{tararwaa} \\ \text{tararda} \end{matrix}$ zaa a feedee birii
A. kept on finding that one was going to skin the monkey.
- (10) Amīnu yaa $\begin{matrix} \text{rika} \\ \text{zatoa} \\ \text{zaton} \end{matrix}$ zaa a feedee birii
A. kept on thinking that one would skin the monkey.



Where a head NP is present, the complement S may be extraposed across an adverbial e.g.

- (11a) gun baa ni laabaarii yau ceewaa an kashee Audu
 they told me the news today that Audu was killed

COMPLEMENT EXTRAPOSITION is subject to a number of restrictions but these concern the lexical items which function as the head N of the NP, or the main verb of the sentence in which the S is situated. As such they can be handled by Lakoff's rule-features¹, and need not be stated in the conditions on the transformation. There are no conditions on the type of structure across which the S may be moved within S.

4.2. RELATIVE CLAUSE EXTRAPOSITION

RELATIVE CLAUSE EXTRAPOSITION moves relative clauses away from their heads to the right. It differs from CLEFT EXTRAPOSITION in that full relative clauses which are extraposed in this way always have an initial optional PRO-element (wa-n, wa-r, wa(a-r), ya-r, etc) and an obligatory da relativizer. This might indicate that while CLEFT-EXTRAPOSITION precedes either COMP-DELETION or DA-INSERTION

1. i.e. essentially, lexical items can be marked \pm EXTRAPOSITION, rather than the transformation being marked \pm applicable where x lexical item is the nth term of the structural description. If the sets of elements governed by a rule-feature fall together with other lexical classes, this can be handled by lexical redundancy rules.

(depending on the choice of analysis), RELATIVE CLAUSE EXTRAPOSITION follows such a rule².

I would contend that the movement of adjectival phrases beginning with mai/maasu, genitive phrases beginning with na/ta, and adjectives away from their heads is also a result of RELATIVE CLAUSE EXTRAPOSITION, since in my analysis these are all reduced relative clauses³. In this respect Hausa is less constrained than English, in which full relative clauses and certain types of reduced relatives may be extraposed, e.g. (12), but not adjectives (13).

(12) A letter arrived yesterday { which my friend had written
written in Hausa }

(13) * Something arrived yesterday strange.

2. On the ordering of RELATIVE CLAUSE EXTRAPOSITION, see below, Section

3. The agentive/possessive mai/maasu clauses would presumably be derived from either progressive (naa + verbal noun) or possessive (naa da + NP) relative clauses, e.g. mootaa mai guduu - a car which runs (fast), would be derived from something like mootaa da ta kee guduu - a car which runs fast; mootaa mai fitilaa - a car with a lamp, from something like mootaa da ta kee fitilaa - a car which has a lamp. But the actual structure on which RELATIVE REDUCTION operates may be more remote than this, i.e. before the relativizer da has been inserted, and the tense changed. If naa is a form of the copula, this could be erased by some form of COPULA DELETION, perhaps before it becomes part of the Aux (see Appendix 1, ~~Section~~). COPULA DELETION would then apply in the formation of genitives and adjectives too, e.g. the derivation of mootar Iisa, - Isa's car from a structure like NP [mootaa S [Iisa naa da mootaa] S] NP [car [I. has a car] and mootaa babba - big car from NP [mootaa S [mootaa babba cee] S] NP - [car [car is big] maa + singular or plural suffixes, na or ta, or nothing would be added where appropriate in the three types respectively, the adjective then being optionally moved to the left of the head noun. The statement of precise conditions for these transformations is difficult, and this may indicate that the underlying structure of the embedded S should be somewhat more abstract than that discussed above. Further analysis of the derived structure of NP's is needed to ascertain at what stage, if any, S is pruned; RELATIVE CLAUSE EXTRAPOSITION cannot be considered a diagnostic of this in Hausa, unlike in English.

Ross attempts to explain the impossibility of deriving (13) from (14)

(14) something strange arrived yesterday

by the fact that the type of RELATIVE CLAUSE REDUCTION which forms adjectives applies before RELATIVE CLAUSE EXTRAPOSITION, and that the S dominating strange is pruned as soon as the embedded sentence is reduced, thus rendering EXTRAPOSITION (which only applies to S) inapplicable. Obviously either the ordering of these rules or the pruning convention would have to be modified for Hausa.

In another respect, however, the operation of RELATIVE CLAUSE EXTRAPOSITION is more restricted in Hausa than in English. We have seen in (12) how relative clauses can be extraposed from subjects in English: this is not possible in Hausa e.g. (16) cannot be derived from (15).

- (15) wata wasii $\left\{ \begin{array}{l} \text{(wad) da abookiinaa ya rubuutaa} \\ \text{mai farantaa mini cikii} \\ \text{ta abookiinaa} \\ \text{buuƙaƙƙiyaa} \end{array} \right\}$ taa zoo jiya
- a letter $\left\{ \begin{array}{l} \text{which my friend had written} \\ \text{cheering me up} \\ \text{of my friend} \\ \text{opened} \end{array} \right\}$ arrived yesterday
- (16) * wata wasii $\left\{ \begin{array}{l} \text{(wad) da abookiinaa ya rubuutaa} \\ \text{mai farantaa mini cikii} \\ \text{ta abookiinaa} \\ \text{buuƙaƙƙiyaa} \end{array} \right\}$ taa zoo jiya
- a letter arrived yesterday $\left\{ \begin{array}{l} \text{which etc.} \\ \text{"} \end{array} \right\}$

Nor can a relative clause within an indirect object as in

(17) be extraposed across a direct object to produce sentence (18)

(17) zaa ka yi wa abookii (wan) da ka ke amince da shii maakircii?
would you do to a friend whom you trust deception?

(18) * zaa ka yi wa abookii maakircii (wan) da ka ke amince da shii?
would you do to a friend deception whom you trust?

4.3. Extraposed Relative Clauses and Right-hand Topics

But the ungrammaticality of sentences like (16) and (18) is not immediately obvious, since sentences which are apparently exactly the same in their written form are grammatical. I would claim that in these latter sentences the right-hand relative clause is in fact a topic or dislocated NP, the head NP of which is identical with the subject NP, and has been deleted under conditions of coreferentiality.⁴ Anaphoric deletion rather than pronominalization is the rule where the right-hand NP is qualified by a relative or reduced ^{relative} clause. Such headless topics can be clearly distinguished from extraposed relative clauses by the following criteria, which apply to headless topics.

- (a) like other topics, both to the left and the right of S, they are marked off from the rest of the sentence by a pause.

Certain other sentence-final juncture features also precede the topic NP, such as a more pronounced fall in pitch, followed by a resumption of higher pitch in the topic, and some variation in final vowel length.

- (b) these topics may be followed by a "modal" particle especially kuwa.

Such particles are closely associated with the topic function,

e.g:

- (19) wasiikaa taa zoo jiya ~~da~~ ^{bunda} ddiyaa kuwa
a letter arrived yesterday, an opened one
- (c) if such a topic is a full relative clause, it must begin with the full relative forms wanda/wadda/wadanda etc. and not simply with the relativizer da
- (20) * wata wasiikaa taa ^{zoo} jiya da abookinaa yarabuntaa

4. If the NP in question is dislocated, it is a copy of the left-hand NP, therefore the use of coreferentiality would be superfluous. Such a RIGHT DISLOCATION transformation would be a strange copying rule, however, as it moves an NP-S, leaving only an NP behind.

4.4. Restrictions on RELATIVE CLAUSE EXTRAPOSITION.

EXTRAPOSITION of relative clauses occurs most commonly in the movement of relative S and reduced relative S from the predicate NP in a copular sentence to the right of the copula as in (23) derived from (22)⁵, or from the final object NP in a verbal sentence to the right across certain adverbials as in (25) derived from (24), and other minor elements like modal particles and the negative particle há, as in (25) derived from (24). In these cases, there is no pause or other juncture feature preceding the relative clause; a particle following it is not interpreted as modifying the clause, but the whole sentence i.e. it is in sentence-final position attached to the

5. Incidentally, where RELATIVE CLAUSE EXTRAPOSITION applies to a copular sentence with a single NP, this may cause ambiguity e.g.

(A) agwá^agwa^a cee gurgu^awá
may be interpreted as "it's a lame duck" i.e. the result of the application of RELATIVE CLAUSE EXTRAPOSITION to agwá^agwa^a gurgu^awá cee (where agwá^agwa^a gurgu^awá is an NP). But it may also be interpreted as the result of PREDICATE EMPHASIS on gurgu^awá agwá^agwa^a cee, where gurgu^awá is the subject NP and agwá^agwa^a the predicate NP, i.e. "the lame one is a duck". Where the adjective is replaced by a relative clause with an initial relative pronoun as in (B):

(B) agwá^agwa^a cee wadda mu kee neema^a

the ambiguity can persist, but the sentence can be disambiguated by tone. I have not managed to investigate this curious observation in any detail, but it does seem as if the tone of nee/cee is markedly polar (i.e. opposite to the preceding tone) to the final tone of the preceding noun only where the S is produced by RELATIVE CLAUSE EXTRAPOSITION, where the S results from PREDICATE EMPHASIS, the difference in tone of the copula and the final syllable of the preceding noun is barely perceptible, e.g. (B) has the pattern (C) where it is the result of PREDICATE EMPHASIS, (D) where of RELATIVE CLAUSE EXTRAPOSITION, and for the ~~low~~ ^{low} tone final taagaa the pattern is (E) and (F) respectively.

(C) — — —
agwá^agwa^a cee wadda

(D) — — —
agwá^agwa^a cee wadda

(E) — — —
taagaa cee wadda

(F) — — —
taagaa cee wadda

This seems to be an intonational feature, probably related to the quite different surface structures of the types of sentence involved, although in the absence of any detailed study of Hausa intonation I cannot suggest how. The fact that this phenomenon only occurs with relative clauses with initial relative pronouns may indicate that it is in some way connected with the tonal variability of these elements.

matrix S as in (22) - (23), and the clause may begin with *da*,

- (22) waccan agwagwa^a { da mu kee neemaa
mai Kafaa Daya } cee kuwa
gurguwaa
ta Maalam Yusufu
that one duck { that we are looking for
with one leg } be too
lame
of Maalam Yusufu
i.e. that one is the duck we are looking for etc.

- (23) waccan agwagwa^a cee { da mu kee neemaa
mai Kafaa Daya } kuwa
gurguwaa
ta Maalam Yusufu
that one duck be { that we are looking for } too
etc

- (24) zaa a sooya agwagwar^a nan { da mu kee neemaa
mai Kafaa Daya } yau
gurguwaa
ta Maalam Yusufu
one will fry that duck { that we are looking for } today
etc.

- (25) zaa a sooya agwagwar^a nan yau { da mu kee neemaa }
etc
one will fry that duck today { that we are looking for }
etc.

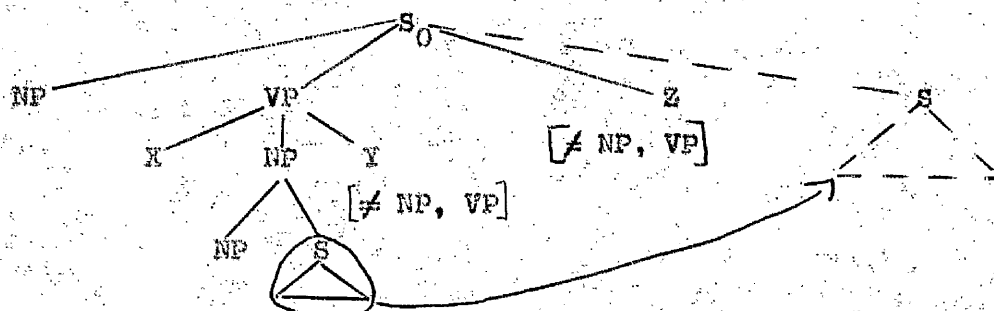
- (26) baa zaa a sooya agwagwar^a nan { da mu kee neemaa } ba
etc
one will not fry that duck { that we are looking for } (neg)
etc

- (27) baa zaa a sooya agwagwar^a nan ba { da mu kee neemaa }
etc
one will not fry that duck (neg) { which we are looking for }
etc.

Unlike the other types of EXTRAPOSITION, ^{CLAUSE}RELATIVE/EXTRAPOSITION is extremely restricted as to the type of element which the S may cross in its movement to the right. Its ungrammaticality when applied to subject and indirect object NP's indicates that there is a condition on the transformation that the S may not cross VP's (for the subject

case), and NP's (for the indirect object case). These restrictions also take care of S's (since they contain VP) and PP's (since they contain NP). It is interesting that (25) is questionable in some dialects; this would follow from our analysis of such adverbs as yau - "today", as underlying PP's (a + yau, where yau is an NP of a particular type). The fact that (25) is grammatical for at least some speakers might show however that this kind of adverb has less of the qualities of a PP containing an NP at the stage when RELATIVE CLAUSE EXTRAPOSITION applies.

So RELATIVE CLAUSE EXTRAPOSITION can be seen to operate in the following way: (where X or Y and Z may be null).



Objections may be raised that the transformation dealt with here is not confined to relative clauses, on the basis that (a) other elements within NP to the right of the head are moved to the right of the copula, particles and some adverbials; and (b) there is a general phenomenon in Hausa whereby the order of these minor elements and all kinds of clauses and phrases (not just relative clauses) is reversed so that the minor elements precede the others.

4.5. RELATIVE CLAUSE EXTRAPOSITION and CONJUNCT MOVEMENT

Point (a) provides support for an analysis of adjectives,

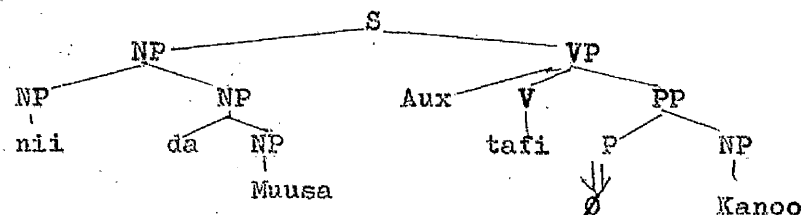
on independent grounds to account for sentences which have da + NP to the right, and which have a plural Auxiliary form which has a singular interpretation. This is commonly found with special verbs of comitative action such as hadaa in (35), but it is possible for any type of verb which can involve joint action, as in (36)

(35) mun hada tafiya Kanoo da Muusa
we (= I) did together go Kano with Musa

(36) mun tafi Kanoo da Muusa⁶
we (= I) went to Kano with Musa

If such sentences are derived from a structure with a conjoined subject like (37) (the proposed underlying structure of (36)), which is paralleled by the surface sentence (38), then the plural Auxiliary can be accounted for.

(37)



(38)

nii da Muusa mun tafi Kanoo
I and Musa Aux went to Kano
[+ PLUR]

If AUX AGREEMENT applies before CONJUNCT MOVEMENT, the subject is still conjoined, therefore, plural, at the time of agreement and this agreement is carried into surface structure provided

-
6. This is not to be confused with the following sentence
(*) mun tafi da Muusa Kanoo
we took M. to Kano

tafi da here is an "associative" verb (Parsons). These have both comitative and causative features in their meaning.

there is no subject NP present.⁷ This transformation is obviously different from the one we have been discussing, since it moves elements over VP (Aux tafi Kanoo) and NP's (Kanoo).

4.6. RELATIVE CLAUSE EXTRAPPOSITION and RIGHT SHUFFLE

As far as point (b) is concerned, the elements which we have been discussing in terms of permitting themselves to be crossed over by relative clauses (viz. the Cop, in "S-focus" sentences, ba, particles and some adverbials which normally have sentence-final position) also allow adverbials and adverbial clauses to cross over them.

e.g.

(39) sun zoo gidan sarkii nee	{	tsakar daree	}
	{	saboo da an musu zaaluncii	}
	{	yin kaarea	}
they came to the king's house	{	in the middle of the night	}
	{	because they have suffered	}
	{	oppression	}
	{	to make a complaint	}

7. CONJUNCT MOVEMENT applies whether the subject NP is + or -PRO but there is no plural agreement where there is a singular subject in surface structure e.g.

(h) { Audu/ yaa } tafi Kanoo da Muusa.
 { * sun }

In order to generate Aux agreeing in number with the surface [-PRO] subject, it seems necessary to introduce a rule which corrects the plural agreement based on the conjoined subject to singular. This cannot simply be considered a re-application of AUX AGREEMENT since this has already applied on that cycle. Such a rule could operate after PRO-SUBJ DELETION, on condition that the subject NP is present, like PRO-PREFIX DELETION (see Chapter 7, Section 14).

Note too that where the subject NP has become the focus, it is still possible in some dialects for the plural agreement to remain in the clause e.g.

(i) Audu nee suka tafi Kanoo du Muusa
 it was A who they went Kano with M.

Here, (using the focus-raising analysis) FOCUS-RAISING and RELATIVE FORMATION (including the deletion of the subject NP) take place on the highest cycle before the rule applies correcting the AUX. This rule appears then to be post- or last-cyclic.

(40)

ba su zoo gidan sarkii ba { tsakar daree
saboo da an musu zaaluncii
yin kaaraa }

they did not come to the king's house (Neg)

{ in the middle of the night
because they have suffered oppression
to make a complaint. }

If we now wish to maintain that these sentences are derived from structures in which the "S-focus" nee and ba respectively are the final elements, by the same transformation which extraposes relative clauses, then some generalization is needed to cover the two types of element moved. On the face of it this would prove very difficult to find: the elements moved in (39) and (40) and similar sentences are generally speaking Adverbials, therefore underlying PP's in our view although this is open to doubt in the case of saboo da and doomin clauses of cause and purpose⁸. Probably the most satisfactory criterion here is being a right S-daughter i.e. outside VP. Thus adverbials of destination, which are VP-members, cannot ~~follow~~ follow such elements e.g.

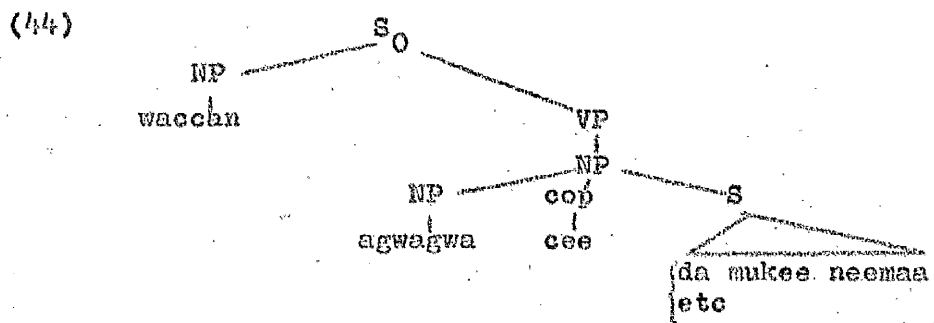
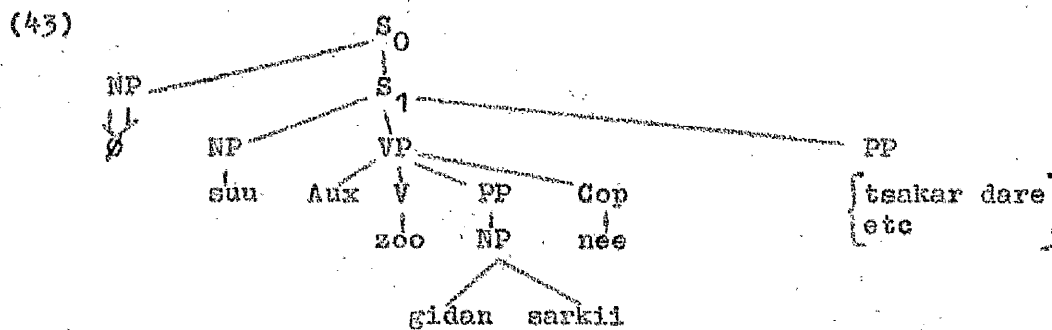
- (41) * sun zoo nee gidan sarkii
- (42) * ba su zoo ba gidan sarkii

The relative clauses which are extraposed, on the other hand, are originally members of VP, and are S's not Adverbials.

In order to avoid the unhappy disjunction of these two categories, it is possible to maintain that it is not the S or Adverbial which is moved to the right, but Con, Neg etc. which are moved to the left and attached in some way to VP. However in the

8. Because it is difficult to determine what the underlying preposition would be; a is a possibility but there is no surface evidence for this that I know of.

case of Cop this would create strange surface structures. For the S-focus type, under the focus-raising analysis, nee would have to be lowered into an embedded S, a type of operation which is recognised as suspect⁹, and the top S would be left exhaustively dominating the embedded S, as in (43) based on (39). As for the transformation which we have been treating so far as RELATIVE CLAUSE EXTRAPOSITION the alternative would involve moving nee/cee inside the predicate NP, completely distorting the normal copular S structure, as in (44) based on (39)



A further possibility arises from the fact that the rearrangement of Cop and Neg and S-daughters affects the semantic interpretation of the sentences. Further details are presented in

9. While raising is well attested as a syntactic operation, lowering is confined to a few disputed cases.

in Chapter 7 Section as part of an argument for regarding negation as originating in a higher S. Under this proposal, Adverbials occurring to the right of the second ba as in (40) would originate in the higher negative S, and those occurring to the left as in (46) would originate in the embedded S. A similar argument could be developed for the more subtle semantic effect of the position of S-focus nee, i.e. that they originate in the higher S in (39) and the lower in (45), since the focus-raising approach provides a ready-made complex deep-structure.

- (45) sun zoo gidan sarkii yin kaaraa nee
it's a fact that they came to the king's house to make a complaint.

(without stress on "to make a complaint"; contrast (39), which means approximately "it's a fact that they came to the king's house and the reason was to make a complaint", without as much emphasis on the reason as when yin kaaraa is itself the focus)

- (46) ba su zoo gidan sarkii yin kaaraa ba
they didn't come to the king's house to make a complaint.

(here "to make a complaint" is within the scope of negation equally with the rest of the sentence; in (40) the intention of making a complaint is interpreted as a fact, although the truth of the main action is denied).

Whatever the merits of such a proposal, it is fraught with problems. For instance, it would be extremely difficult to generate the phrase yin kaaraa in a higher copular or negative sentence in (39) and (40). The use of verbal noun phrases standing alone with the meaning of purpose (probably derived from phrases of the form doomin + ^{mainly} $\left[\begin{smallmatrix} S \\ NP \end{smallmatrix} \right]$) is confined to sentences with verbs of the motion class. In order to obey this constraint, yin kaaraa must be in the same simple S as zoo in deep structure. The nuances of interpretation which differentiate (39) and (40) from (45) and (46), might have to be left to interpretive rules which take account of differences of scope of negation and emphasis after transformations have reordered

the relevant elements S_0 the higher S adverbial proposal may have to be abandoned in favour of a new movement rule which we shall call RIGHT SHUFFLE.

What is important for our argument, though, is that what we have been calling RELATIVE CLAUSE EXTRAPOSITION, unlike the above phenomenon does not effect the semantic interpretation of the sentence. On these grounds, together with those adduced earlier, I feel justified in regarding RELATIVE CLAUSE EXTRAPOSITION and RIGHT SHUFFLE as distinct processes. One of the factors which makes this distinction appear rather arbitrary is the fact that relative clauses appear to cross S-focus nee, which under the focus-raising analysis, means crossing an upward S boundary and a VP-node, which is prohibited by the condition on RELATIVE CLAUSE EXTRAPOSITION. For instance, (47) is grammatical.

- (47) an zoo da wata wasiikaa nee da abookiinaa ya rubutaa
one came with a letter cop which my friend wrote

But if we examine RIGHT SHUFFLE more closely we find that it is not confined to right S-daughters generated in the base i.e. PP's, but also to derived S-daughters i.e. principally complement S which have been extraposed, as in (48)

- (48) yaakamaata nee ka yi ta karaatuu
it is fitting Cop that you carry on studying.

- (49) bai kamaata ba ka yi ta karaatuu
it is not fitting Neg that you carry on studying

Thus, RIGHT SHUFFLE applies after COMPLEMENT EXTRAPOSITION to move the right-hand S-daughter to the right and into a higher S. It is possible then also that (47) is the result of the application of RIGHT SHUFFLE to the right S-daughter created by the previous application of RELATIVE CLAUSE EXTRAPOSITION. This ordering is not unexpected, since RIGHT SHUFFLE is known to be a late rule which follows KOO-WORD FORMATION (See Chapter 6, Section 7).

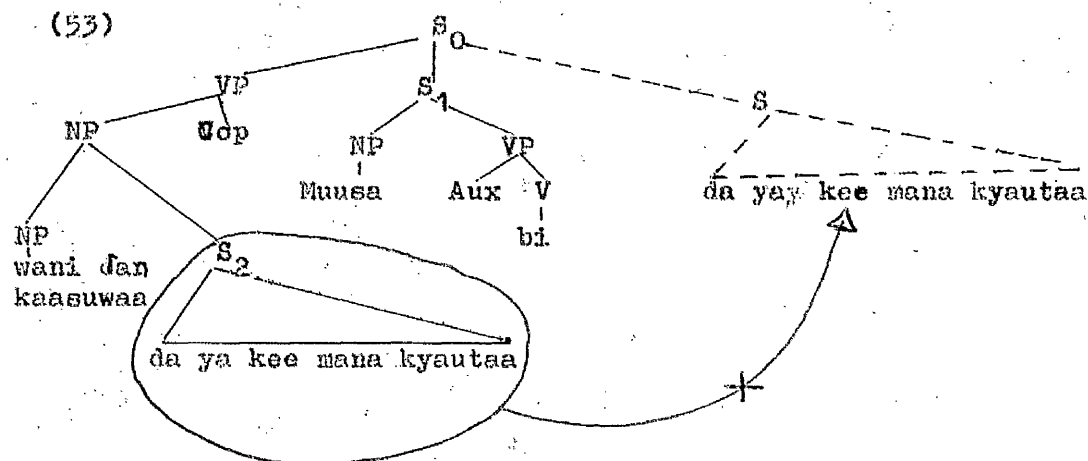
4.7. RELATIVE CLAUSE EXTRAPOSITION in Focus-emphatic Sentences.

The crucial aspect of the preceding sections for the argument against the pseudo-cleft analysis is the restriction on the movement of the relative clause across VP and NP. Providing this is accepted, the statement of the transformations involved is of secondary importance. The first observation concerns the operation of RELATIVE CLAUSE EXTRAPOSITION on focus-emphatic sentences of the form NP - (Cop) - S. A relative clause extraposed from the focus NP may be moved to the immediate right of the copula, to the left of the clause, as in (51), or it may be moved to the right of the clause as in (52). The basic focus-emphatic S is (50), in which the focus is equated with the direct object of the clause.

- (50) wani ^{dan} kaasuwaa da ya kee mana kyautaa nee Muusa zai bi
a market trader who gives us presents be M. will accompany
- (51) wani ^{dan} kaasuwaa nee da ya keemana kyautaa Muusa zai bi
a market trader be who gives us presents M. will accompany
- (52) wani ^{dan} kaasuwaa nee muusa zai bi da ya kee mana kyautaa
a market trader be M. will accompany who gives us presents

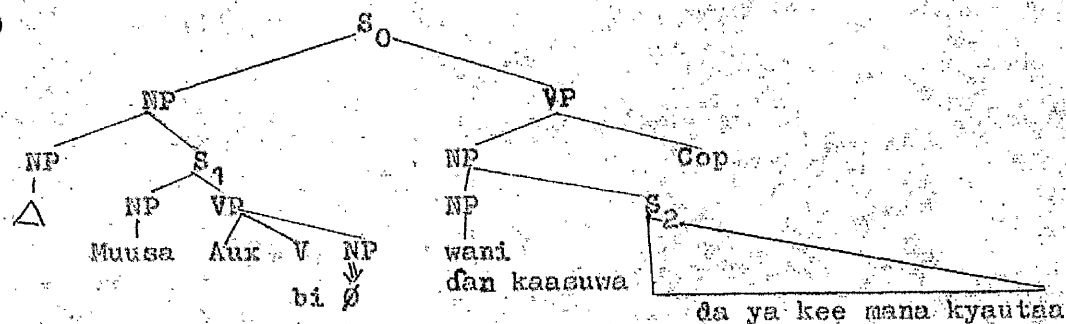
(51) conforms to the restrictions on RELATIVE CLAUSE EXTRAPOSITION, but (52) appears to violate them by moving the relative clause across the clause containing an NP (Muusa) and a VP (zai bi). This is not a case of a right-hand topic, as the clause is introduced by da and has no pause. This is shown in diagram (53), where RELATIVE CLAUSE EXTRAPOSITION applies at near-surface, after CLEFT EXTRAPOSITION, and an ungrammatical result is wrongly predicted. But if the ordering of these transformations is reversed, then RELATIVE CLAUSE EXTRAPOSITION applies to the pseudo-cleft structure (54). As the relative clause only has to cross Cop in this case, it applies successfully producing (55). Only then does CLEFT EXTRAPOSITION Apply. One might expect this to produce (50) only, but one could argue that the order of the relative clause and the

clause is not determined since they are both S-daughters, and the structural change of CLEFT EXTRAPOSITION attaches S to the right of VP, not in any particular order with respect to other elements to the right of VP¹⁰.

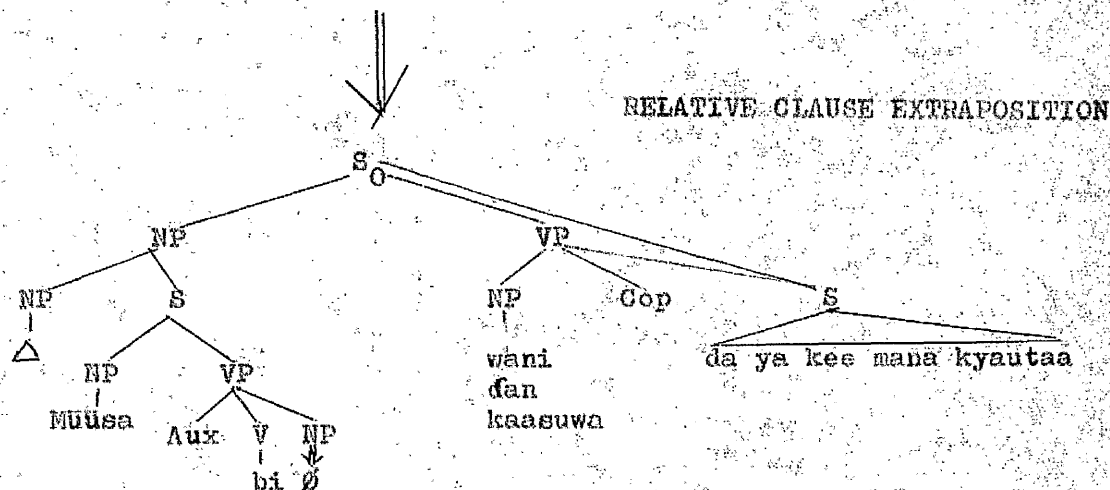


10. A parallel argument could be used for COMPLEMENT EXTRAPOSITION to show that (48) and (49) are generated not by the effect of RIGHT SHUFFLE on extraposed S, but by EXTRAPOSITION itself attaching the S to the higher S in a random order with respect to other S-daughters. This does not in fact seem feasible for (48), where nee according to the focus-raising analysis is in a higher S.

(54)



(55)



If this were the full story, the pseudo-cleft analysis would be as adequate to handle the data as the focus-placement analyses. But there is a further restriction on the second type of movement produced by RELATIVE CLAUSE EXTRAPOSITION, which moves the relative clause to the right of the clause from the focus NP. If the focus NP is equated with a subject or indirect object with a following object in the clause, as in (56) and (57) respectively rather than a single direct object, then extraposition to the left of the clause only is grammatical as in (58) and (59), but extraposition to the right renders the sentence ungrammatical ((60) and (61)).

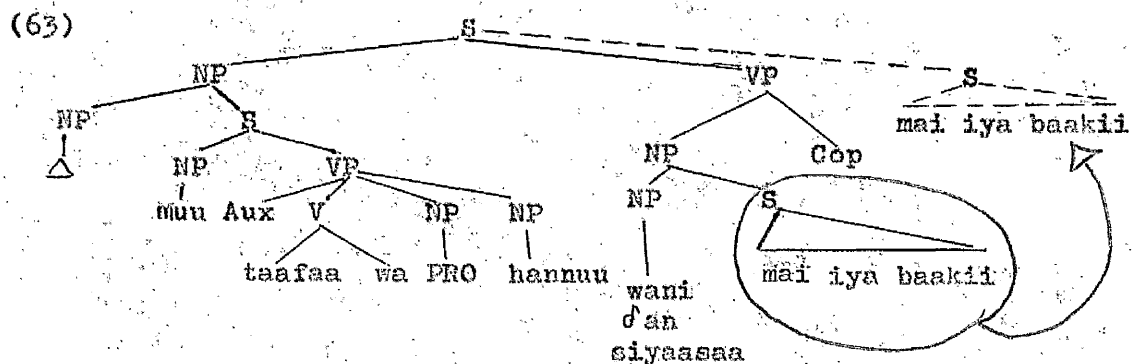
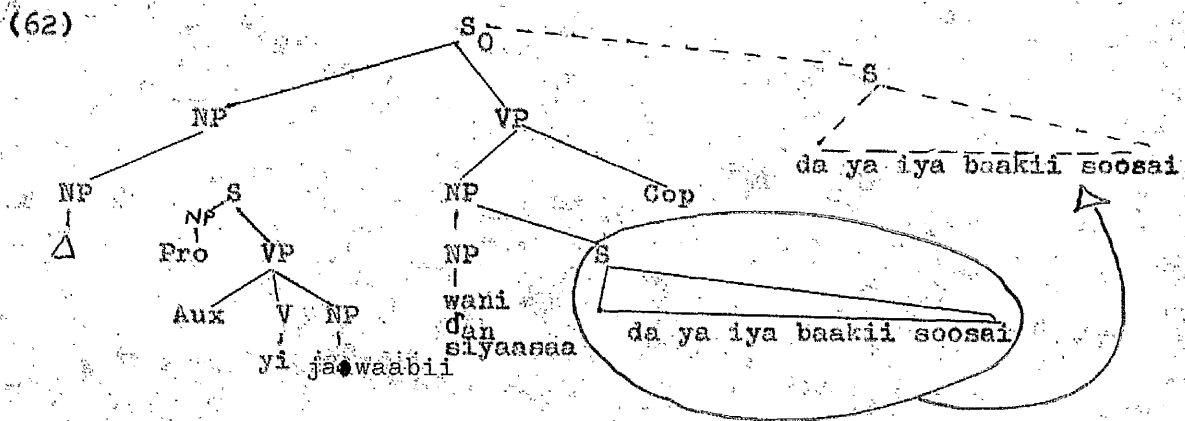
(56) wani dan siyaasaa da ya iya baakii soosai (nee) kee jaawaabii
a politician who can speak well (be) is making a speech

(57) wani dan siyaasaa mai iya baakii (nee) mu kee taafaa wa hannuu
a politician who can speak well (be) we are clapping for hand

(58) wani dan siyaasaa nee da yaiya baakii soosai kee jaawaabii
a politician be who can speak well is making a speech

- (59) wani dan siyaasaa nee mai iya baakii mu kee taafaa wa hannuu
a politician be who can speak well we are clapping for hand
- (60) *wani dan siyaasaa (nee) kee ja'waabii da ya iya baakii soosai
a politician (be) is making a speech who can speak well
- (61) *wani dan siyaasaa (nee) mu kee taafaa wa hannuu mai iya baakii
a politician (be) we are clapping for hand who can speak well

Now if RELATIVE CLAUSE EXTRAPOSITION applied to the pseudo-cleft structures (62) and (63), there would be no reason to anticipate the ungrammaticality of (60) and (61), as the extraposed relative clause only crosses over Cop. As the structure of these pseudo-clefts is the same as that of (54) with the focus NP as predicate NP in a copular S in all cases, there is no way in which the difference can be explained by reference to the pseudo-cleft structure.



4.8. An Explanation using Focus-placements

But there does exist a simple explanation of these facts.

If we consider the non-emphatic sentences corresponding to (50), (56) and (57) ((64), (65) and (66) respectively), the focus elements are direct object, subject and indirect object in the three cases. If we now try RELATIVE CLAUSE EXTRAPOSITION on these sentences, it works only in (64) where the clause has nothing to cross, thus a sentence which is identical in linear order to (64) is produced. In (65), however, the clause would have to cross VP to form (67), and is therefore blocked by the conditions on the transformation; similarly in (66), NP would be crossed in forming (68), and it too is blocked.

- (64) Muusa zai bi wani dan kaasuwaada ya kee mana kyautaa
M. will accompany a market trader who gives us presents.
- (65) wani dan siyaasaa da ya iya baakii soosai ya naa jaawaabii
a politician who speaks well is making a speech
- (66) mu naa taafaa wa wani dan siyaasaa mai iya baakii hannuu
we are clapping for a politician who speaks well hand
- (67) * wani dan siyaasaa ya naa jaawaabii da ya iya baakii soosai
a politician is making a speech who speaks well
- (68) * mu naa taafaa wa wani dan siyaasaa hannuu mai iya baakii
we are clapping for a politician hand who speaks well

What is needed, therefore, is an underlying structure for focus-emphatic sentences which incorporates the structure of the corresponding non-emphatic sentences, in which the eventual focus element retains its grammatical function and position. Only on this basis, and not on the pseudo-cleft can the restrictions on RELATIVE CLAUSE EXTRAPOSITION be simply accounted for. Such a deep structure is provided either by the focus-fronting, or focus-raising approaches.

With focus-fronting, RELATIVE CLAUSE EXTRAPOSITION would simply apply before FOCUS-FRONTING, on sentences like (64)-(66). But while this explains EXTRAPOSITION to the extreme right of the

sentence it has difficulty with the relative clauses which immediately follow Cop. Either RELATIVE CLAUSE EXTRAPOSITION must apply again (on the same cycle) after FOCUS-FRONTING, or the relative clause must somehow be dragged along with the Focus NP + Cop to the left. Neither of these ^{is a} ~~are~~ satisfactory solutions.

The following solution in terms of FOCUS-RAISING seems to me superior, although the problems associated with RELATIVE CLAUSE EXTRAPOSITION are still far from solved¹¹. Given (69) as the deep structure of (50), (51) and (52), (52) is derived as follows: RELATIVE CLAUSE EXTRAPOSITION applies on the S₁ cycle, producing (70). Then on the S₀ cycle, wani dan kaasuwa is raised without its relative clause by FOCUS-RAISING (71). After RELATIVE FORMATION etc. have been completed CLEFT EXTRAPOSITION moves S₁ including the stranded relative clause S₂ to the right, forming (72). RIGHT SHUFFLE might finally adjust the structure so that S₂ is attached to S₀.

11. Apart from the problem raised in the course of this derivation there remains the question of the interaction of RELATIVE CLAUSE EXTRAPOSITION and PREDICATE EMPHASIS. Here, too, the extra-posed relative clause may either precede or follow the right-hand subject, e.g. (K) or (L) derived from (J).

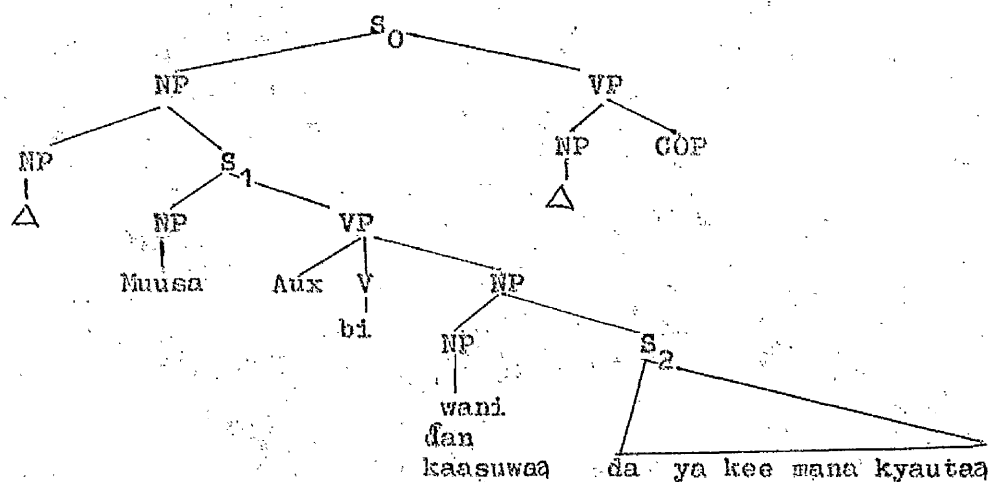
(J) wannan agwa^agwa^acee {da mu kee neemaa }
etc

(K) agwa^agwa^acee {da mu kee neemaa } wannan
etc

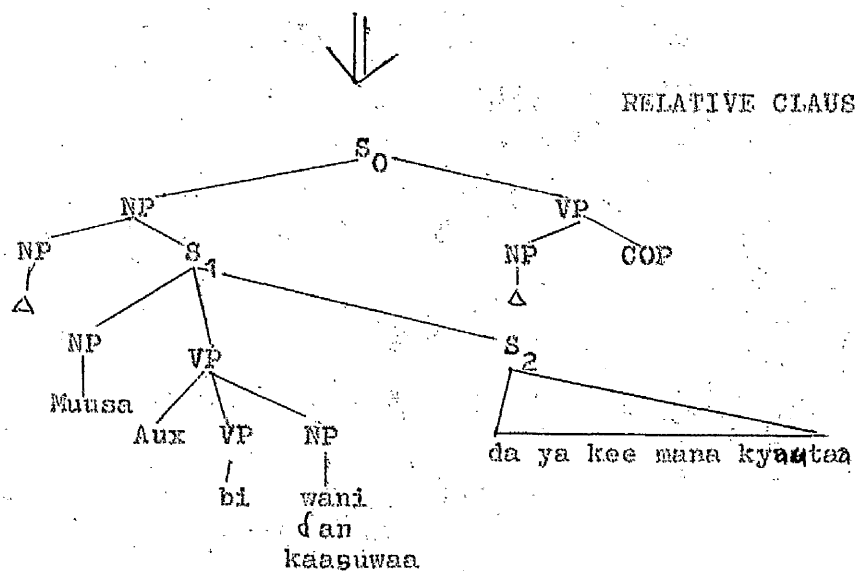
(L) agwa^agwa^acee wannan {da mu kee neemaa }
etc

But given the analysis of PREDICATE EMPHASIS proposed in this thesis there is only one cycle involved here, so the type of explanation offered for verbal focus-emphatic S will not work. To generate (L) EXTRAPOSITION must precede PREDICATE EMPHASIS. For (K), either optional ordering of right S-daughters must be involved (see Note 10), or wannan regarded as a dislocated topic. The latter is most likely since there can be a pause preceding it.

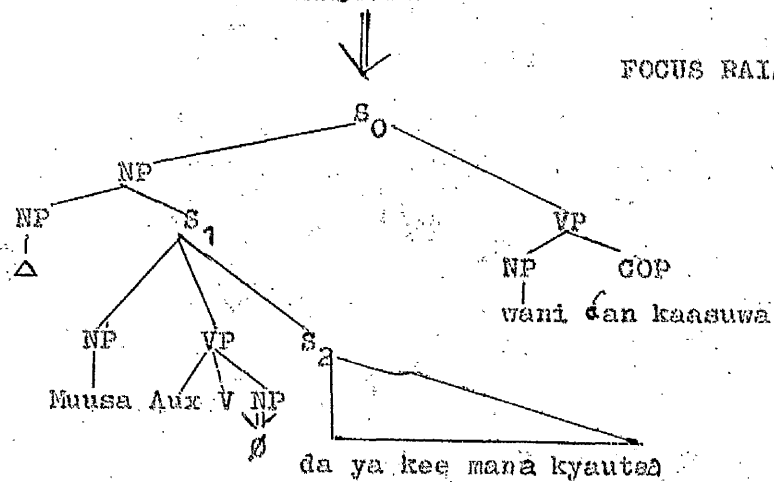
(69)



(70)

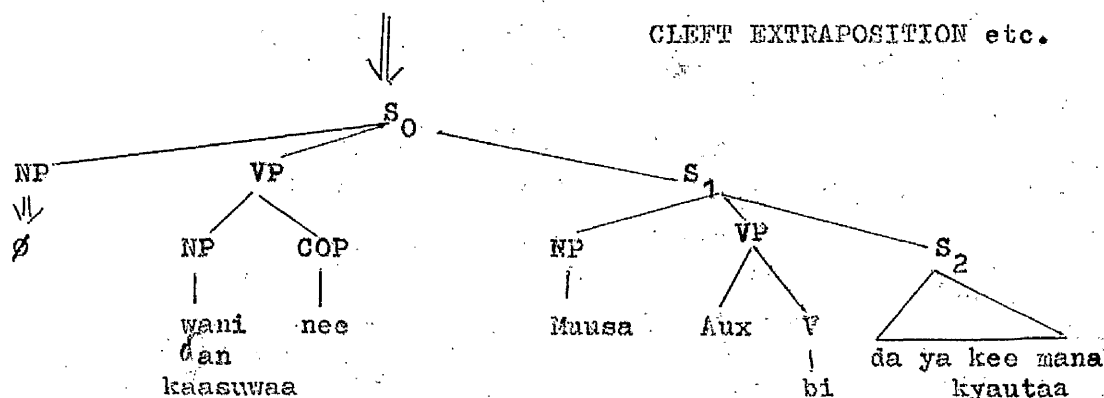


(71)



(72)

CLEFT EXTRAPOSITION etc.

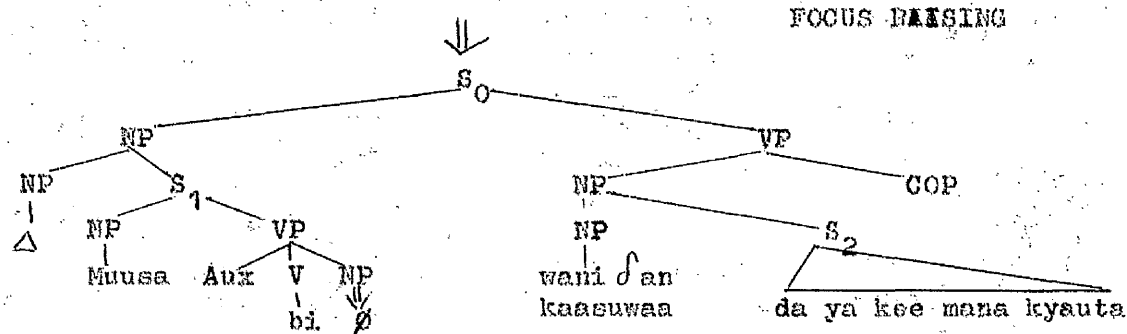


In the derivation of (51), nothing of interest to us happens on the S₁ cycle. FOCUS-RAISING applies on the S₀ cycle forming (73) from (69) by raising wani kaasuwaan and its relative clause, followed on this occasion by RELATIVE CLAUSE EXTRAPOSITION, operating on the S₀ cycle, which moves S₂ to the right of Cop. The position of S₂ and S₁ in surface structure might be taken to indicate that CLEFT EXTRAPOSITION follows RELATIVE CLAUSE EXTRAPOSITION, but this contradicts the order which was proposed above (section 2) to account for the absence and presence of da respectively. The tree (74) is the structure after both have applied in whatever order. (see Appendix II, Rule 35)

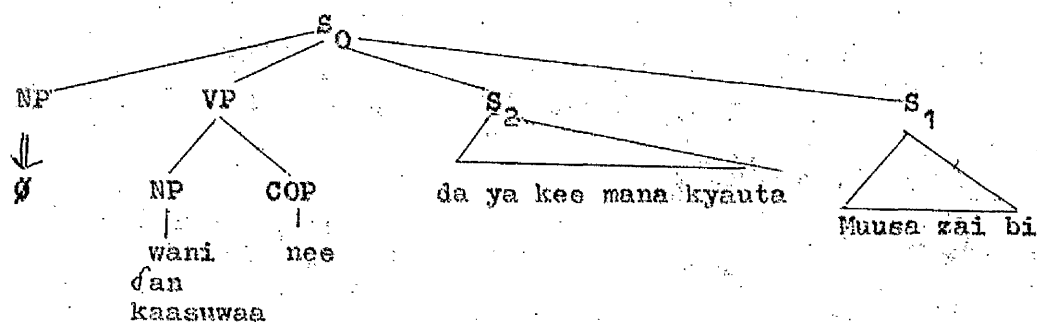
(73)

(69)

FOCUS RAISING


 RELATIVE CLAUSE EXTRAPOSITION
 (on S₀)
 & LEFT EXTRAPOSITION

(74)



CHAPTER 5

PRONOMINALIZATION AND REFLEXIVIZATION

5.1. The Status of Pronouns and Reflexives

Before discussing the behaviour of anaphoric pronouns in focus-emphatic sentences, it is necessary to make a fairly lengthy digression on the nature of PRONOMINALIZATION and REFLEXIVIZATION in Hausa. The occurrence of pronouns anaphoric to NP's within the S is here regarded as a product of a transformation which replaces a full NP with a pronoun where there is another NP which is coreferential¹ to it and in a certain structural relationship to it. Roughly speaking, where the two NP's are clause-mates i.e. not separated by an S-boundary, the former NP is replaced by a reflexive pronoun (Kai +

1. Here the convention of referential indices is used. Where two NP's are marked ¹, this indicates that they are interpreted as coreferential and the grammaticality or ungrammaticality of the sentence is on this interpretation alone. This does not imply acceptance of the theory of referential indices as formulated in Chomsky (1965). In fact the formulation of coreferentiality here is inadequate in Hausa.

In Hausa, pronouns sometimes refer not to a particular referent but to the class to which the antecedent belongs (cf. one - pronominalization in English), e.g.:

- (a) zan sayi wata farar riigaa in naa gan ta
I shall buy a white gown if I see it (= one)

In most circumstances, however, deletion is more frequent than pronominalization for non-specific anaphora. Deletion, rather than pronominalization, of coreferential elements is very common in Hausa, but it is not discussed here, since it is not immediately relevant to the problem in hand.

It might be possible to regard PRONOMINALIZATION and REFLEXIVIZATION as forms of deletion of the head N, since pronouns and reflexives appear to act as part of the Determiner within NP's in Hausa, e.g. shii Muusa-n 'that Musa (whom we are referring to)'; Muusa kansa - 'Musa himself' (Postal 1969)). The derivation would then be as follows:

- (b) $\text{Muusa}^i \text{ yaa cee sun saabaa da shii Muusan}^i \Rightarrow \text{Muusa yaa cee sun saabaa da shii } \emptyset$
Musa said they had got used to to him Musa \Rightarrow Musa said they had got used to him \emptyset

- (c) $\text{Muusa}^i \text{ yaa zargi Muusa kansa}^i \Rightarrow \text{Muusa yan zargi } \emptyset \text{ kansa}$
Musa blamed Musa himself \Rightarrow Musa blamed \emptyset himself.

the appropriate genitive pronominal suffix), and the transformation is called REFLEXIVIZATION; otherwise, it is replaced by third-person pronouns (shii, itas, suu, later converted to other forms by morphological rules).

In Hausa, as in English, there is uncertainty as to whether the pronoun is present in the deep structure, or added by transformation on the basis of some kind of "coreferentiality". One could reject the transformational theory of pronouns altogether, as does Jackendoff (1969). Pronouns would then be generated as NP's in the base, coreferentiality being assigned by the semantic interpretation rules.

What is important is that the lines of argument pursued in this chapter do not depend on which of the above approaches is chosen. In practice I will refer to PRONOMINALIZATION and REFLEXIVIZATION as if they were transformations which simply replace NP's marked with the correct index with a pronoun, because I find this most convenient for exposition. What I wish to show is that these processes in Hausa are cyclic and always operate (as regards NP and pronouns respectively) from left to right ("forwards") at the level at which they apply; this could be true of semantic interpretation rules too. Indeed, the interpretive rules which Jackendoff sets up for pronouns in English do apply cyclically, not merely at either deep or surface structure. What I am concerned to show is not the relative merits of the two views of pronominalization, but how the two aspects of PRONOMINALIZATION mentioned above when combined with certain types of ^{movement} transformations can explain a certain range of data. In the course of this the focus-raising approach is shown to be adequate to explain these data and the pseudo-cleft approach inadequate.

5.2. "Backward" Pronominalization with Nominalization

In English, under certain conditions² a full NP may refer to a pronoun to its left, as well as vice-versa. In Hausa, such backward pronominalization never occurs³. This is shown by the ungrammaticality of the Hausa sentences (1) - (3) in contrast to the grammatical English translations.

- (1) *da sukaⁱ ga rundunaa, sai abokan gaabaaⁱ suka jaa da baayaa
when theyⁱ saw the army, the enemyⁱ retreated
- (2) *duk wanda ya san shiⁱ zai cee Muusaⁱ mutumin kirkii nee
everyone who knows himⁱ would say Musaⁱ is a decent fellow
- (3) *rasuwar wansaⁱ babbar hasaaraa ce ga Vladimirⁱ
the death of hisⁱ brother was a great loss to Vladimirⁱ

What does occur in Hausa, as in English, is obligatory backward pronominalization in a limited number of constructions. The first type which I shall look at are those in which a nominalized S, with an S embedded in it, which contains a pronoun, precedes an NP with the same features as the pronoun. Where this NP is the "understood"

2. There have been a number of attempts to characterize these conditions, which need not concern us, since we are dealing with a different phenomenon here. See for example Langacker (1969a)

3. This statement is subject to qualification in dialects highly influenced by English. For instance (3), ungrammatical for the great majority of speakers, occurs in the book "V.I. Lenin, Takaitaccen Tarihin Rayuwarsa" translated by Ado Gwadabe, which is peppered with backward pronominalization, presumably because it is a direct translation from the English version. Foreign radio stations broadcasting in Hausa, are said to be major sources of backward pronominalization. I cannot say whether the dialect on which the present chapter is based, which permits only obligatory backward pronominalization in narrowly defined circumstances, is itself influenced by English. The original informant was a well-educated man with a good command of English, but the data were checked with three unrelated informants, all with less command of or exposure to English. I conclude therefore that this is a dialect spoken by at least some people in Kano, and whether it is a product of some English influence is irrelevant, since it is systematic and internally consistent. The area of pronominalization in modern Hausa is, like gender, subject to dialectal variation and even struggle between different tendencies.

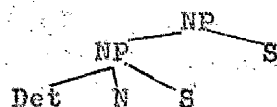
subject of the nominalization, as in (5) and (7), the NP and the pronoun can be interpreted as coreferential. Unlike the situation with "optional" backward pronominalization, if the positions of the NP and pronoun are reversed, this interpretation is impossible, i.e. the normal "forward" pronominalization does not work, at surface structure. The following examples illustrate this:

- (4) * zaton zaa su tuuree Auduⁱ bai daamee shiⁱ ba
 * the thought that they would overthrow Auduⁱ did not disturb himⁱ.
- (5) zaton zaa su tuuree shiⁱ bai daami Auduⁱ ba
 the thought that they would overthrow himⁱ did not disturb Auduⁱ.
- (6) * da ganin doogarai sun keewayee Buubaⁱ sai yaⁱ yi iihuu
 * on seeing that the guards had surrounded Bubaⁱ heⁱ cried out.
- (7) da ganin doogarai sun keewayee shiⁱ sai Buubaⁱ ya yi iihuu
 on seeing that the guards had surrounded himⁱ Bubaⁱ cried out
- (Examples 8 - 11 omitted).

These examples are very similar to those given for English by Ross (1969a), to whom the following argument is also due. But there is another type of nominalization, consisting of a verbal noun plus a relative clause, which also displays obligatory backward pronominalization, where the relative clause follows the embedded complement S, as in (12) and (13). This I take to be the deeper ordering; the relative clause more commonly precedes the embedded S, as in (14) and (15) and here pronominalization is forward not backward. The latter order is the result of EXTRAPOSITION of Complement S⁴.

4. One would of course expect the ordering Complement S - Relative Clause on the basis of the deep structure.

(d)



In the case of nominalization the situation is more complex, however. Further justification of the view taken here is given in Note 6.

- (12) *zaton zaa su tuuree Auduⁱ da yaⁱ yi bai daamee shiⁱ ba
the thought that they would overthrow Aⁱ that heⁱ did not
disturb himⁱ
- (13) zaton zaa su tuuree shiⁱ da Auduⁱ ya yi bai daamee shiⁱ ba
the thought that they would overthrow himⁱ that Aⁱ did not
disturb himⁱ
- (14) zaton da Auduⁱ ya yi (ceewaa) zaa su tuuree shiⁱ bai daamee
shiⁱ ba
the thought that Aⁱ did that they would overthrow himⁱ did not
disturb himⁱ
- (15) * zaton da yaⁱ yi (ceewaa) zaa su tuuree Auduⁱ bai daamee shiⁱ
the thought that heⁱ did that they would overthrow Aⁱ did not
disturb himⁱ.

5.3. EQUI-NP DELETION and the Cyclicity of PRONOMINALIZATION

How can these anomalies be explained? Let us begin with

(S). The crucial factor here is that Audu is understood to be co-referential to the "subject" of zaton, i.e. the person having this thought. Where the subject of such a nominalization is present and non-coreferential and where the absent "subject" of a noun with a complement is not interpreted as coreferential to a following NP, but to an unspecified person or set of persons (possibly the a - "fourth-person" in Hausa) as in (18), then pronominalization is forward, not backward. In English, pronominalization is optionally backward in such cases.

- (16) zaton Isma'iila zaa su tuuree Auduⁱ bai daamee shiⁱ ba
the thought of Isma'iila that they would overthrow Aⁱ did not
disturb himⁱ
- (17) * zaton Isma'iila zaa su tuuree shiⁱ bai daami Auduⁱ ba
the thought of Isma'iila that they would overthrow himⁱ did not
disturb Aⁱ
- (18) tseegumin wai Saaniⁱ yaa ci hancii yaa saa an sallamee shiⁱ
the malicious rumour that Sanⁱ had taken a bribe caused himⁱ to be
sacked

- (19) * tseegumin wai yaaⁱ oi hancii yaa saa-an sallami Seaniⁱ
 the malicious rumour that heⁱ had taken^a bribe caused Saniⁱ
 to be sacked

I assume that nominalizations of this type are derived from the structure $NP[Det\ N\ S]_{NP}$, where the subject of S is co-referential to a right-hand NP, and N and usually Det are empty. NOMINALIZATION frontsifts V and other VP elements under $Comp\ [\bar{NP}]_{Comp}$, and the subject of the NOMINALIZATION is deleted under identity with the right-hand NP which is coreferential to it by the transformation EQUI-NP DELETION. Note too, that even if nominals like zattoo were considered to be derived in the lexicon, there would still need to be some kind of "subject" present in the underlying NP structure, which is deleted by identity, in order to explain the data under examination⁵.

EQUI-NP DELETION applies both forwards and backwards, the condition on its application being only that the NP deleted must be the subject of a nominalized S embedded in the S which contains the coreferential deleting NP. In its forward application, it converts (20) into (21), in its backward application (22) into (23).

- (20) $s_0 [yaa-roo^i\ yanaa\ son\ NP]_s [yaa-roo^i\ shaa\ noonoo]_s [NP]_s$
 boy wants boy drink milk

- (21) yaaroo yanaa son shan noonoo
 the boy wants to drink milk

5. Instead of ordering EQUI-NP DELETION after NOMINALIZATION one could say that EQUI-NP DELETION itself, combined with the pruning of S, creates the conditions for VERBAL-NOUN FORMATION $NP[VP]_{NP}$

As for the "lexicalist" approach, Chomsky agrees that NP's which refer to actions or states should mirror the structure of S in having "Subjects". (1970) # 2

(22) S_0 [NP [S_1 [yaaroo¹ shaa noonoo] S_1 yanaa kaaraa wa yaaroo karfii] S_0]
 boy drink milk is increasing to boy strength

(23) shan noonoo yanaa kaaraa wa yaaroo karfii
 drinking milk increases they boy's strength

Now, if as we claim, Audu is present as the subject of zat - in the deep structure of (5), then we can say that it is this Audu¹ which changes Audu¹ in the complement S into shii i.e. PRONOMINALIZATION must precede EQUI-NP DELETION which erases the left-hand Audu. But this ordering cannot apply generally in the sentence, since if this were so the right-hand Audu would also be pronominalized, which it is not. It seems then that PRONOMINALIZATION must also follow EQUI-NP DELETION. The rule ordering A - B - A which we have here, is a strong argument for regarding A i.e. PRONOMINALIZATION as a cyclic rule.

Let us work out the derivation of (5) on the above premise. In (24) (where inessential details of structure are omitted), we have the deep structure. No relevant rules apply on the S_2 cycle. On the S_1 cycle, EXTRAPOSITION shifts the Complement S_2 from the object position and attaches it to S_1 , the empty NP node being then deleted by a general constraint⁶. PRONOMINALIZATION applies changing Audu in S_2 to shii

6. EXTRAPOSITION is assumed to take place here since the result of frontshifting a Complement S object would in this case be (e), which is very doubtful, if not ungrammatical, as a surface NP

(e) ?? zaton zaa su tuuree shi^{na}_{an} Audu
 the thought they would overthrow him of Audu
 I do not know why S-objects do not follow the verb when it is fronted in nominalizations, while other objects do.

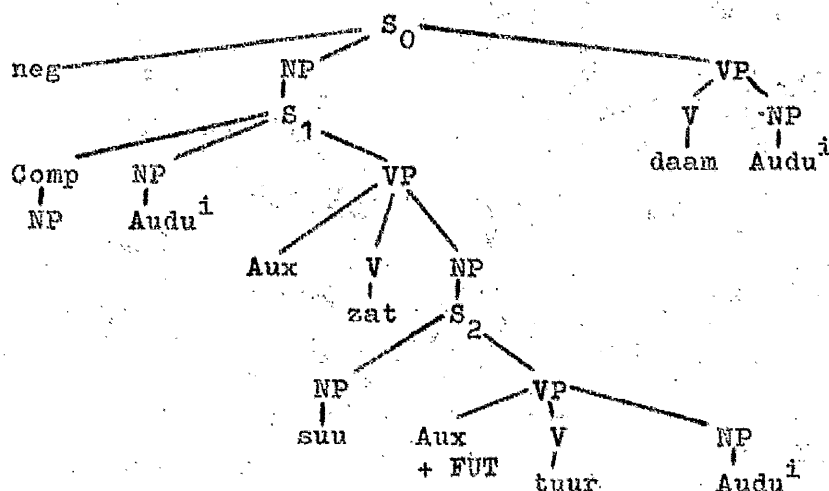
An alternative is to regard Verbal-Noun+Subject+S-Object structures as a result of the stranding of the object when V is moved, as has happened in (f), which contrasts with (g) which has the same meaning where the whole VP has been moved.

(f) kaamaawar Audu kiifii (g) kaamaa kiifin Audu
 catching of Audu fish catching fish of Audu

But EQUI-NP DELETION is impossible in (f) Kaamaawar kiifii can only mean "catching by the fish". As we have seen, it is possible where the right-hand object is an S. It seems preferable to regard the latter as a result of EXTRAPOSITION on the lower cycle, as in (31)-(32).

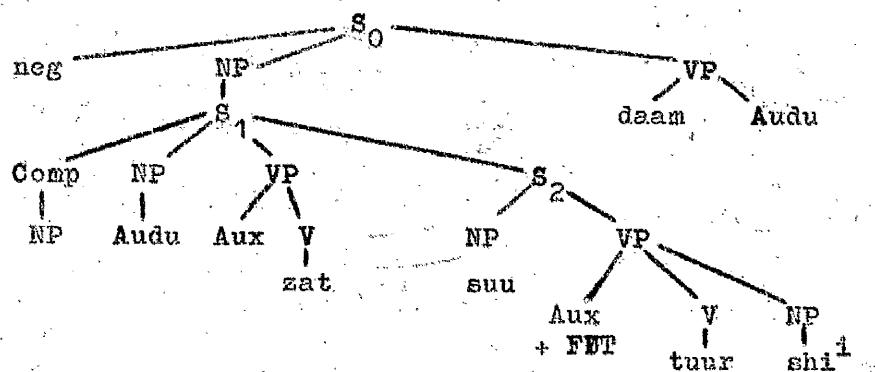
since it is coreferential to Audu in S_1 to its left producing tree (25). Moving on to the S_0 cycle, NOMINALIZATION^{applies} moving the V to the left of S_1 under $\text{Comp} [\text{NP}]_{\text{Comp}}$ and creating the conditions for the formation of the verbal noun zatoo, and EQUI-NP DELETION deletes Audu in S_1 under identity with Audu in S_0 . Since after the application of EQUI-NP DELETION, there is only one Audu remaining, PRONOMINALIZATION cannot apply. The correct surface structure is produced by assuming only that PRONOMINALIZATION operates forwards and cyclically.

(24)



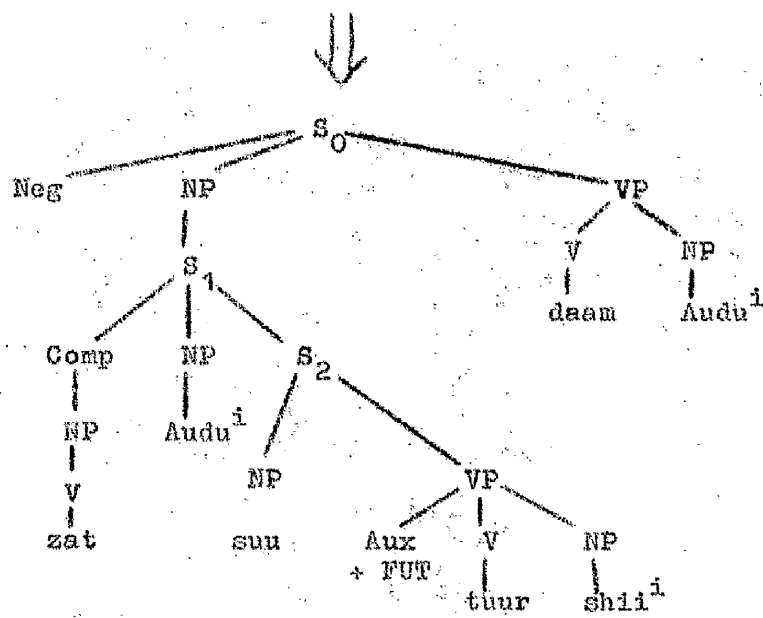
EXTRAPOSITION and PRONOMINALIZATION

(25)



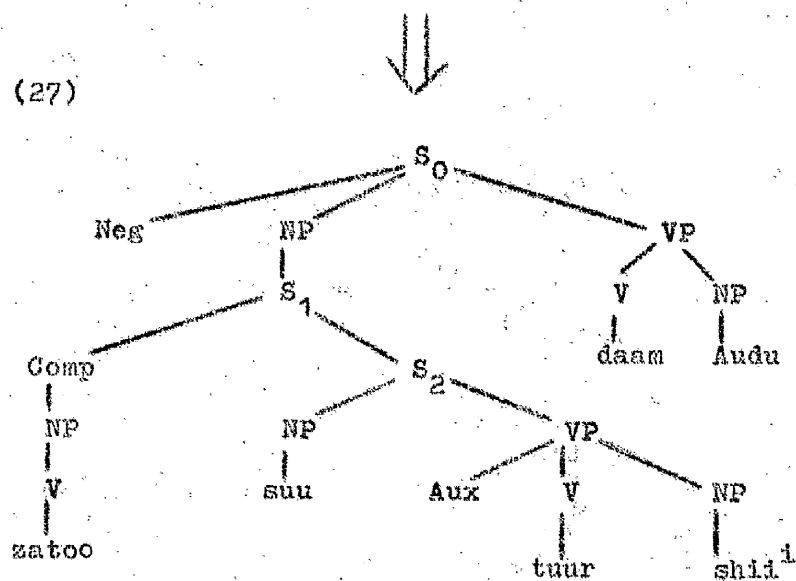
NOMINALIZATION

(26)



EQUI-NP DELETION

(27)

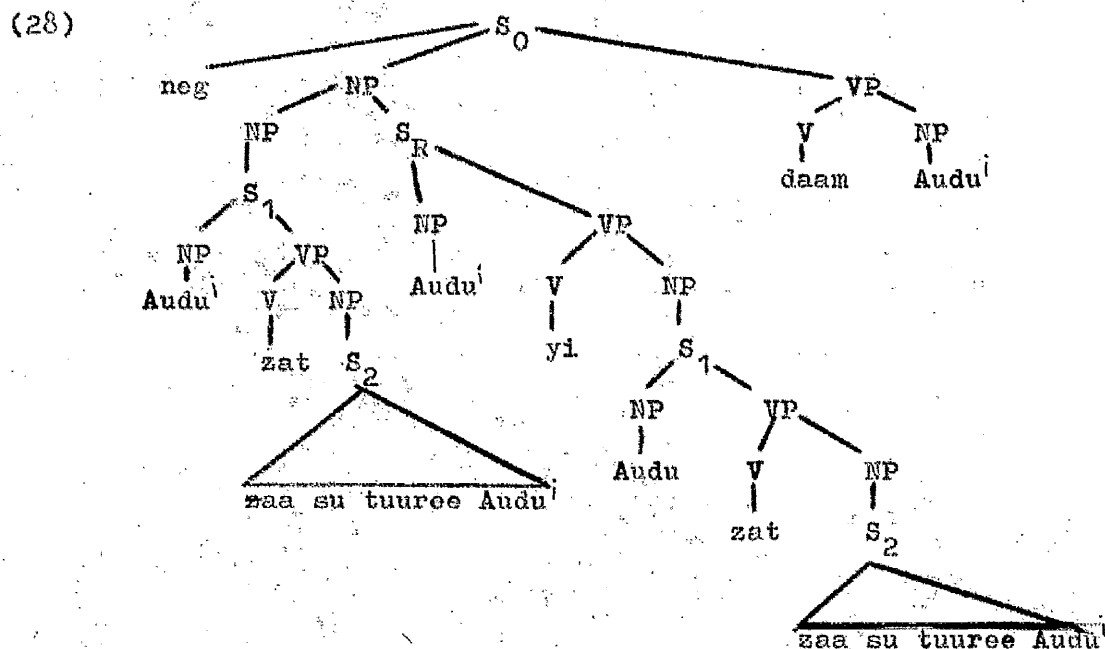


At first sight one might regard the subject nominalization in (13) as of the same type as (5).

(5) zaton zaa su tuuree shiⁱ bai daami Auduⁱ ba
the thought that they would overthrow himⁱ did not disturb Auduⁱ

(13) zaton zaa su tuuree shiⁱ da Auduⁱ ya yi bai daamee shiⁱ ba
the thought that they would overthrow himⁱ that Aⁱ did did not disturb him

but with a relative clause added, i.e. with a deep structure like (28)



The facts of pronominalization could then be explained in the same way as above, except that there are two Audu's left when EQUI-NP DELETION has applied; so that Audu in S_R in (28) pronominalizes Audu in S_0 . However it is difficult to explain (14) on this basis

(14) zaton da Auduⁱ ya yi (ceewaa) zaa su tuuree shiⁱ bai daamee shiⁱ
ba

the thought that Aⁱ did that they would overthrow himⁱ did not disturb himⁱ

EXTRAPOSITION of S_2 operating on (28) would not affect the order of constituents unless drastic changes were made in the type of movement which EXTRAPOSITION produces; otherwise the S_2 in (14) might be considered to be the one contained in S_R , but this would entail ad-hoc deletion of the left-hand S_2 and changes in the type of deletion allowed by RELATIVIZATION.

I prefer to follow Bagari's suggestion that nominalizations with relative clauses of this type result from a separate type of NOMINALIZATION from that in (5), but that both are derived from $NP[S]NP$. Where there is no relative clause, V and optionally other constituents of VP are chopped to the left of the S under $Comp[NP]Comp$, i.e. they are moved to the left leaving no trace. Where there is a relative clause, the derivation is as outlined in (29)-(30). The VX is copied into the left position, leaving a PRO-V (yi) and a PRO direct object in the VP. Where the original direct object is left in the VP, it may be preceded by wa/ma as for FOCUS-RAISING. RELATIVIZATION then applies, changing Aux and deleting the object⁷.

Under this analysis, the apparent backward pronominalization is explained by the fact that VP containing an NP coreferential to the subject NP is moved to the left of the subject NP, after it has been pronominalized in the preceding (pre-NOMINALIZATION) cycle. Where EXTRAPOSITION has applied on the earlier cycle, as in (14), the S containing the pronoun is no longer within VP, so it is not moved to the

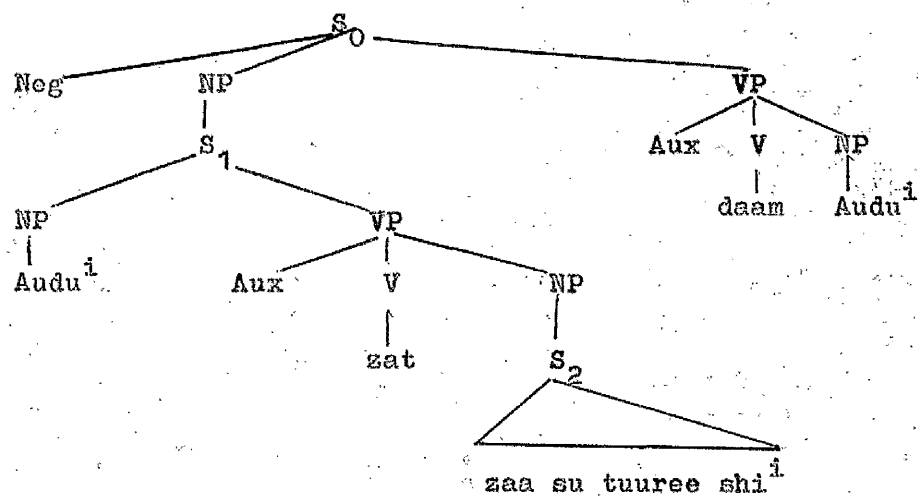
7. Bagari's suggestion is rather loosely formulated in that the transformation shifts the verbal element which is the object of yi to the left within the embedded S and at the same time produces a string following it which looks like a relative clause but which does not seem to be linked by any principled generalization to the relative structure. The present approach regards the presence of both a copy and an original V(X) as the condition for RELATIVIZATION.

left of the correlative subject NP. Hence we get "forward" pronominalization in surface structure.

For example, consider the derivation of (13). (29) represents the structure of the sentence at the beginning of the S_0 cycle, when PRONOMINALIZATION has already applied, changing Audu in S_2 to shil. To this structure the second type of NOMINALIZATION applies, moving V together with the object S_2 to the left and creating a relative clause dependent on the verbal-nominal head formed.

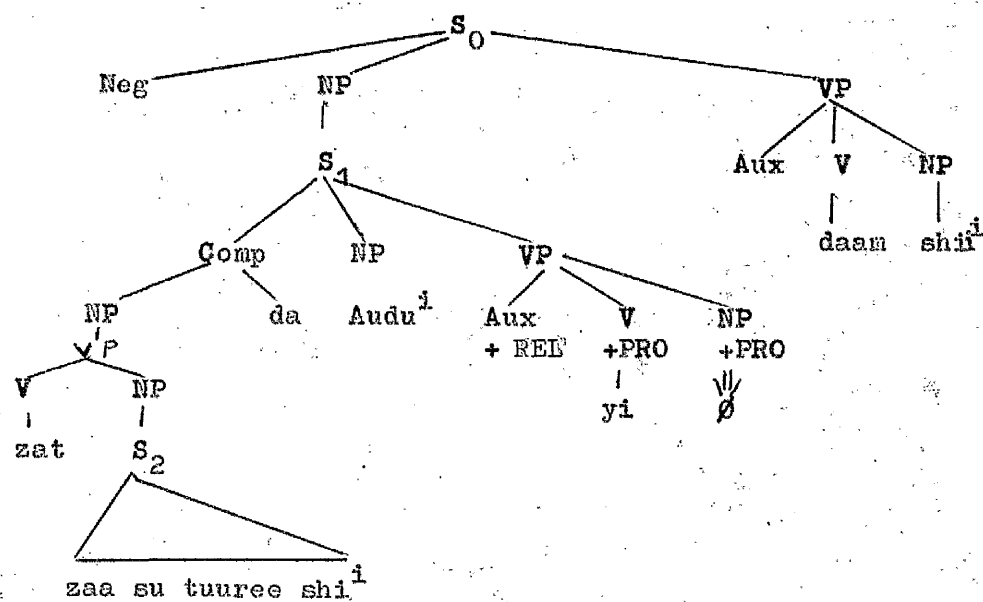
Finally PRONOMINALIZATION applies again changing Audu in S_0 to shil by identity with the subject of the relative clause ending up with (30). Contrast this with the structure (31), which is (14) at the start of S_0 cycle, when EXTRAPOSITION has already applied on the S_1 cycle as well as PRONOMINALIZATION. In the change from (31) to (32) the same processes take place as from (29) to (30), but this time S_2 is left on the right-hand side of S_1 .

(29)

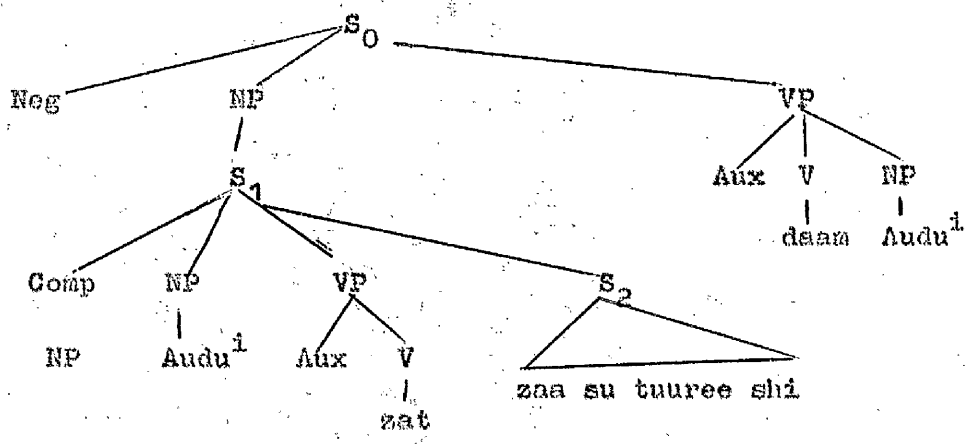


NOMINALIZATION II &
RELATIVIZATION
PRONOMINALIZATION

(30)

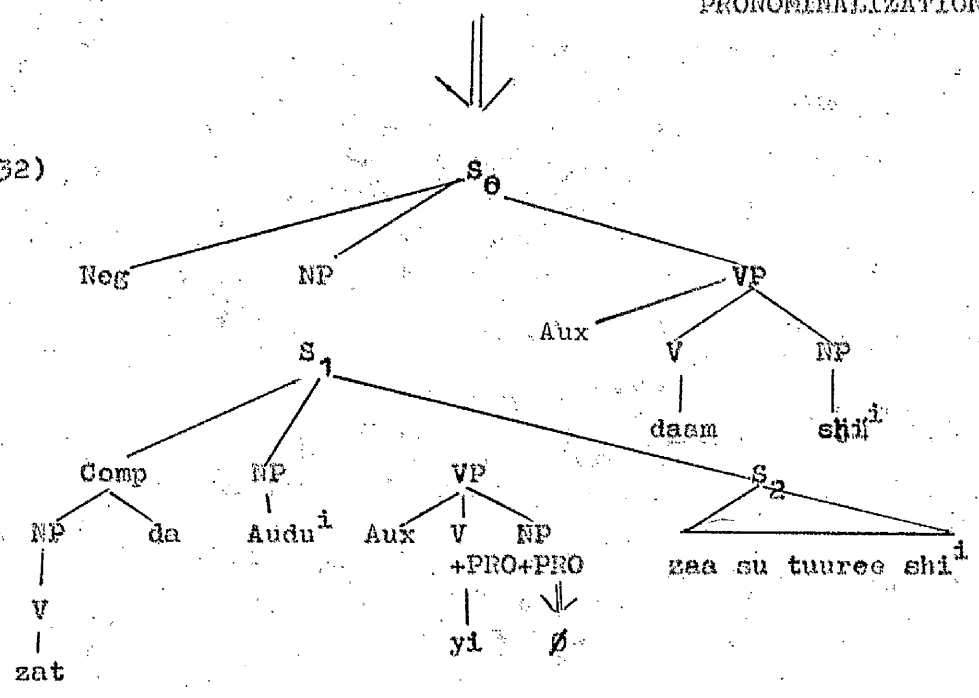


(31)



NOMINALIZATION II,
RELATIVIZATION
PRONOMINALIZATION

(32)



5.5. "Backward" Reflexivization in Nominalizations

Reflexive pronouns may also precede the NP's to which they refer under certain circumstances. For instance, the reflexive pronoun may be part of the verbal-nominal head of a "relative" type of nominalization, and the coreferential NP the subject of the relative clause as in (33).

- (33) M. has not heard about doing to herself injection that Mairo did

Given the view of NOMINALIZATION outlined above, this is easily explained if REFLEXIVIZATION, like PRONOMINALIZATION, is forward in operation and cyclic. Given the deep structure (34) for (33) on the S_1 cycle, REFLEXIVIZATION applies, changing the second Mairo to kanta. Then NOMINALIZATION applies on the S_0 cycle, converting (34) to (35) in which kanta is to the left of the S_1 subject Mairo.

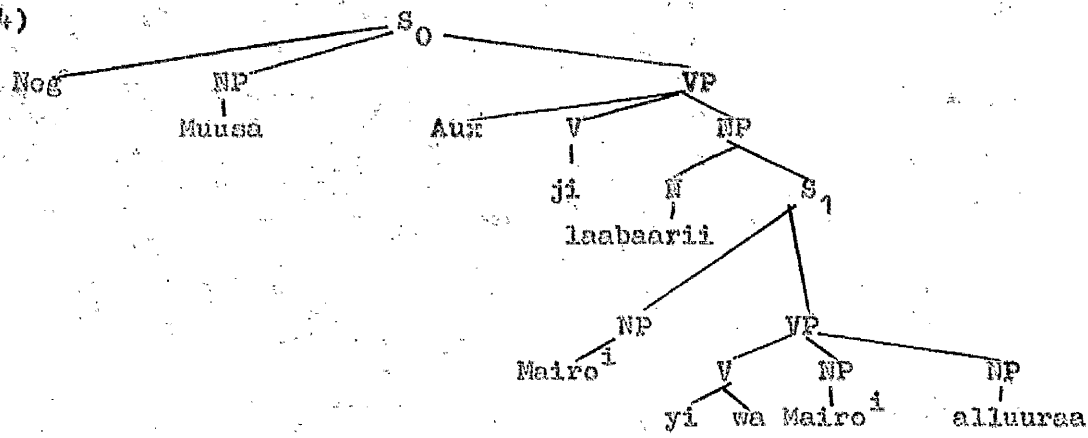
5.6. "Backward" Pronominalization in Focus-Emphatic Sentences.

Pronouns also precede the full NP's to which they refer in focus-emphatic sentences. This occurs for instance when the focus is equated with the direct, indirect or oblique object of the clause, and contains a pronoun coreferential to the subject of the clause, as in the sentences below. In such cases backward pronominalization is obligatory, since reversing the pronoun and full NP produces ungrammaticality.

- (36) wansaⁱ (nee) Auduⁱ ya dookaa
it was hisⁱ brother that Aⁱⁱ beat

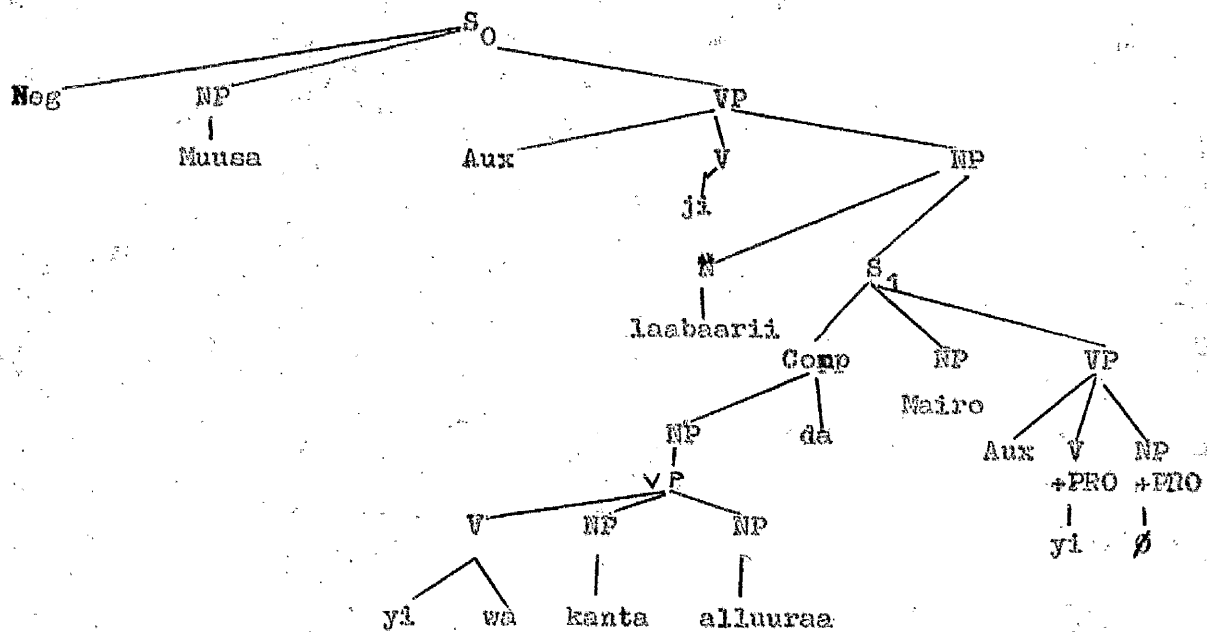
- (37) *wan Auduⁱ (nee) yaⁱ dookaa_i
it was Aⁱ's brother that heⁱ beat

(34)



REFLEXIVIZATION on S₁
 NOMINALIZATION II on S₀

(35)



- (38) mai zaaginsa (nee) Ishaakuⁱ yaⁱ yi wa kasheedii
it was the-one-who-curses-him that Iⁱ gave a warning to
- (39) *mai zaagin Ishaakuⁱ (nee) yaⁱ yi wa kasheedii
it was the-one-who-curses-Iⁱ that heⁱ gave a warning to
- (40) Kwallon da maalamii ya baa shiⁱ (nee) Hasanⁱ ya kee waasaa da shii
it's the ball that the teacher gave himⁱ that Hⁱ is playing with
- (41) *Kwallon da maalamii ya baa Hasanⁱ (nee) yaⁱ kee waasaa da shii
it's the ball that the teacher gave Hⁱ that heⁱ is playing with
- (42) ya tafi Kano (nee) Musaⁱ ya kee soo
heⁱ go to Kano be Musaⁱ wants
- (43) *Musaⁱ ya tafi (nee) yaⁱ kee soo
Musaⁱ go to Kano be heⁱ wants

Now both the pseudo-cleft and focus - placement analyses can generate these sentences. For Akmajian's type of cleft derivation PRONOMINALIZATION would have to precede EXTRAPOSITION, so that e.g. (36) would be derived from a pseudo-cleft like (44), where forward PRONOMINALIZATION has applied.

- (44) wanda Auduⁱ ya dookaa wansaⁱ nee
who Aⁱ boat was hisⁱ brother

The clause containing the NP Audu is then extraposed to the right of the coreferential pronoun -sa. The same explanation is available in the focus-raising approach; in the focus-fronting analysis, PRONOMINALIZATION would precede FOCUS-FRONTING.

But the pseudo-cleft analysis with this rule ordering predicts that a pronoun in the focus coreferential to a full NP in the clause is always possible. This is not borne out by the facts. For instance, where the focus is equated with the subject of the clause and the full NP is an object, the opposite of the situation in (36)-(43), then "backward" pronominalization is ungrammatical⁸.

8. "Forward" pronominalization is also impossible, but I argue in Chapter 6 Section 2, that this results from a quite different constraint.

- (45) *wansaⁱ (nee) ya dooki Auduⁱ
it was hisⁱ brother who beat Aⁱ.
- (46) *mai zaaginsaⁱ (nee) ya yi wa Tayaakuⁱ kasheedii
it was the one who curses himⁱ that gave Iⁱ. a warning
- (47) *Ƙwallon da maalamii ya baa shiⁱ (nee) ya burgee Hasanⁱ
it was the ball that the teacher gave himⁱ that impressed Hasanⁱ
- (48) *yaⁱ tafi Kano (nee) zai wahalar da Muusaⁱ ainun
it is for himⁱ to go to Kano that will cause Mⁱ a lot of
trouble

And this despite the fact that the corresponding pseudo-clefts, e.g.

(49) for (45), are quite grammatical.

- (49) wanda ya dooki Auduⁱ wansaⁱ nee
who beat Aⁱ was hisⁱ brother.

Nor is this difference in grammaticality directly related to the grammatical functions of the coreferential elements. For instance, as in (50), a subject focus may contain a pronoun providing the subject is that of an embedded S, and the full NP is in the matrix S and would precede the pronoun in the corresponding non-cleft S, (51). Moreover, a pronoun in a direct object focus is ungrammatical if the coreferential full NP is in a PP, as in (52), whereas if the PP is the focus, as in (53), the sentence is just about grammatical for most speakers. This is obviously related to the fact that the direct object usually precedes the oblique object in the non-cleft sentence ((54) and (55)). Note too that if the PP is in the leftmost position as a result of ADVERBIAL FRONTSIFTING, not a focus-movement

transformation, only forward pronominalization is possible ((56) and (57))?

- (50) ? yaarinyar da kee sonsaⁱ (cee) Aadoⁱ ya kee jiran ta yi rawaa
it is the girl who likes himⁱ that Aadoⁱ is waiting for to dance
- (51) Aadoⁱ yanaa jiran yaarinyar da kee sonsaⁱ ta yirawaa
Aadoⁱ is waiting for the girl who likes himⁱ to dance
- (52) *jakarsaⁱ (cee) aka saamu a gidan Ali
it was hisⁱ bag that one found at Ali's house
- (53) ? a gidansaⁱ (nee) aka saami jakar Aliⁱ
it was at hisⁱ house that one found Ali's bag
- (54) *an saami jakarsaⁱ a gidan Aliⁱ
one found hisⁱ bag at Ali's house
- (55) an saami jakar Aliⁱ a gidansaⁱ
one found Ali's bag at his house
- (56) * a gidansaⁱ an saami jakar Aliⁱ
at hisⁱ house one found Ali's bag
- (57) a gidan Aliⁱ an saami jakarsaⁱ
at Ali's house one found his bag

9. A number of examples of this kind like (50) and (53), appear odd. Forward pronominalization remains ungrammatical in the focus-emphatic S, but very often the NP which would have been a pronoun in the focus, is dislocated to the left of the focus, turning the NP's in the focus and the clause into pronouns e.g.

- (h) Aado yaarinyar da kee sonsa (cee) ya kee jiran ta yi rawaa
(as for) Aadoⁱ the girl who likes himⁱ (be) heⁱ is waiting for her
to dance

This is a favoured way of retaining forward pronominalization. The removal of the full NP subject following the focus is also considered a stylistic improvement.

There is some diversity of judgement, particularly where adverbials are concerned. One informant who agreed with the other judgements in this chapter found either forward or backward pronominalization possible from focus adverbials, particularly saboo da S. Had this been supported by others it would have been an interesting confirmation of the present claims, since saboo da S can occur either to the left or right of S in non-emphatic sentences. The oddness of (53) for some speakers might similarly result from the fact that a PP like a gidan Ali might occur either to the left or the right of jakar Ali in pre-focus-placement structure.

Clearly what is relevant is not grammatical functions, but the order of coreferential NP's in the non-emphatic sentences which correspond to the focus-emphatic sentences. Where the NP which is pronominalized follows the antecedent NP in the non-emphatic structure, i.e. it obeys the forward-only rule of PRONOMINALIZATION, the pronoun may precede the full NP in the emphatic structure. So the grammaticality of (36) is determined by the grammaticality of (58), and the ungrammaticality of (37) and (45) by the ungrammaticality of (59) and (60) respectively.

- (36) wansaⁱ (nee) Auduⁱ ya dookaa
it was hisⁱ brother that Aⁱ beat
- (37) *wan Auduⁱ (neo) yaⁱ dookaa
it was Aⁱ's brother that heⁱ beat
- (45) * wansaⁱ (nee) ya dooki Auduⁱ
it was hisⁱ brother who beat Aⁱ
- (58) Auduⁱ yaa dooki wansaⁱ
Aⁱ beat his brother
- (59) * yaaⁱ dooki wan Auduⁱ
heⁱ beat Aⁱ's brother
- (60) * wansaⁱ yaa dooki Auduⁱ
hisⁱ brother beat Aⁱ.

5.7. The Advantages of Focus-Raising

This is exactly what is predicted by the focus-placement analyses, if PRONOMINALIZATION precedes FOCUS-FRONTING or FOCUS-RAISING. PRONOMINALIZATION operates forwards on structures like (58), and only afterwards is the pronominalization deformed by movement transformations. For the pseudo-cleft analysis, on the other hand, the focus always occupies the same position in underlying structure, that of the predicate

NP in a copular S, following the clause, and subsequent transformations only reverse the position of the focus and clause. It cannot therefore generate only the grammatical sentences by its derivation, since it does not incorporate the essential facts about the position of NP's in the corresponding non-emphatic sentences.

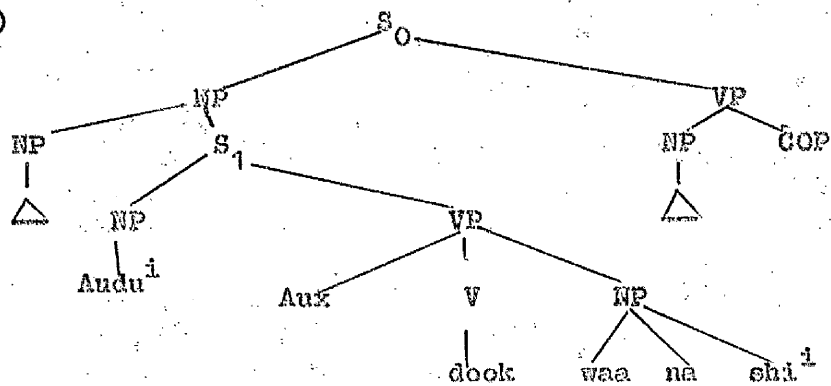
As between focus-fronting and focus-raising, the latter has the advantage that, since it rests on a complex deep-structure, the ordering PRONOMINALIZATION-FOCUS-RAISING is given automatically by the cycle, as we have seen earlier in the chapter that PRONOMINALIZATION is a cyclic rule. With focus-fronting it is necessary to state specifically that FOCUS-FRONTING must follow PRONOMINALIZATION within the cycle.

Consider the derivation of (36), using the focus raising approach

- (36) wansaⁱ (nee) Auduⁱ ya dookaa
 it was hisⁱ brother that Aⁱ beat

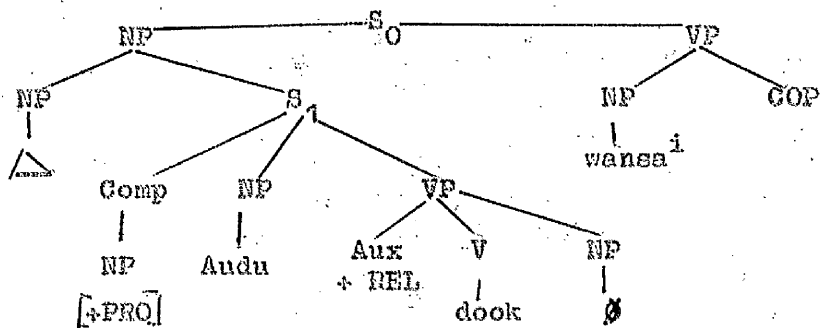
(61) shows the structure at the start of the S₀ cycle, after PRONOMINALIZATION has already applied on the S₁ cycle, changing the Audu dependent on waa to shi (in the genitive construction this becomes sa in Kano dialect), by coreferentiality with the S₁ subject Audu. Then FOCUS-RAISING takes place on the S₀ cycle moving wansa, creating the pseudo-cleft like structure (62). Finally EXTRAPOSITION moves S₁ to the right of the focus wansa (63)

(61)



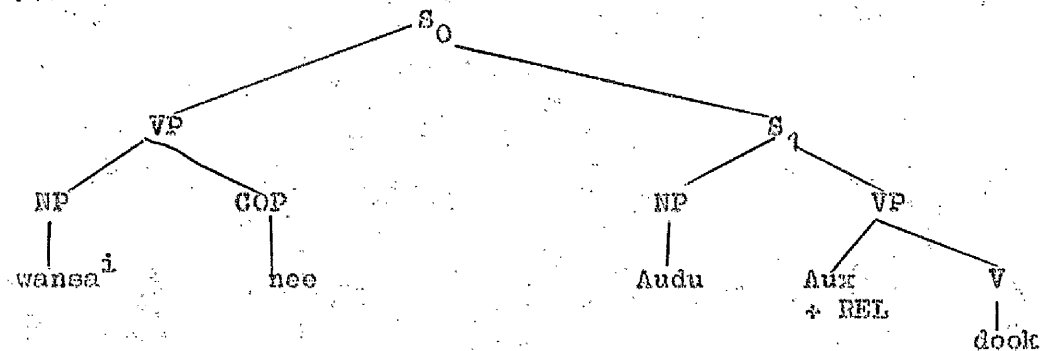
FOCUS-RAISING, RELATIVE FORMATION

(62)



EXTRAPOSITION, COMP-DELETION

(63)



5.8. "Backward" Reflexivization in Focus-emphatic Sentences

Reflexive pronouns occur as the entire focus or as part of it preceding coreferential NP's in the clause, e.g.

- (64) kansaⁱ (nee) Auduⁱ ya dookaa
it was himself that Audu beat
- (65) duukan kansaⁱ (nee) Auduⁱ ya yi
it was beating himself that Audu did

Again, this apparent "backward" reflexivization is a result of REFLEXIVIZATION applying forwards at a deeper level, after which the order of the focus and the coreferential full NP is changed by transformation. It is more difficult in this case to show the deficiencies of the pseudo-cleft analysis in the same way as for non-reflexive pronouns, since the greatest use of the reflexive is that of object coreferential to the clause-subject. Since subject reflexives never occur, the pseudo-cleft analysis appears to have the same effects as focus-placement. What the pseudo-cleft analysis does not explain is why the reflexive form is generated in the predicate NP position, when the NP is not a clause-mate of the coreferential NP in the subject clause. If REFLEXIVIZATION applies before FOCUS-RAISING or FOCUS-FRONTING, though, on a structure like (66) a reflexive is produced as in (67). The focus-placement transformations can then generate (64) or (65)

- (66) Auduⁱ yaa dooki Auduⁱ nee
Aⁱ. beat Aⁱ. be
- (67) Auduⁱ yaa dooki kansaⁱ nee
Aⁱ. beat himselfⁱ be.

5.9

Emphatic Copular Sentences

"Backward" pronominalization does not occur in focus-emphatic copular sentences of the form NP - COP - NP. For instance, if a relative pronoun is inserted as the head of the clause in the version of (36) with Cop present, the sentence becomes ungrammatical, since it is of the above type.

- (68) *wansaⁱ nee wanda Auduⁱ yadookaa
hisⁱ brother be the one whom Aⁱ beat

Under Bagari's derivation, (68) would be derived from the pseudo-cleft (44) and from (68) in turn (36) would be derived from (63) by the deletion of the relative pronoun head of the clause. This has the advantage of making the same emphasis transformation generate both NP - COP - NP and Focus - (Cop) - S, by the switching of subject and predicate NP's. But this view predicts that the behaviour of the two types of sentence will be similar; (36) and (68) show that this is not so. If PRONOMINALIZATION applies before this switching transformation, (PREDICATE EMPHASIS), and the same element is moved in both cases, "backward" pronominalization would be expected in both cases. Any approach which identifies PREDICATE EMPHASIS and CLEFT EXTRAPOSITION cannot handle these examples.

It seems reasonable to suppose that the pseudo-cleft which is the source of the inverted pseudo-cleft is not derived by FOCUS-RAISING, but has a pseudo-cleft deep structure. Akmajian does make the point that his pseudo-cleft structure should not be equated with surface pseudo-cleft sentences. But Chomsky ~~and~~ ~~states~~ states that FOCUS-RAISING is part of the derivation of pseudo-clefts; indeed this is what is most stressed. It is difficult to maintain this

view, where PRONOMINALIZATION is cyclic, in the face of the fact that pronominalization is forward in pseudo-clefts, like (69), where the NP pronominalized precedes the antecedent NP in the corresponding non-emphatic sentence (70).

(69) wanda ya dooki Auduⁱ wansaⁱ nee
who beat Aⁱ was hisⁱ brother.

(70) * wansaⁱ yaa dooki Auduⁱ
hisⁱ brother beat Aⁱ.

One could then argue that PRONOMINALIZATION follows PREDICATE EMPHASIS whereas, as we have seen, it precedes both FOCUS-RAISING and EXTRAPOSITION. The latter ordering results from the cycle, so PRONOMINALIZATION could still follow these transformations within the cycle.

But the full facts cannot be accounted for simply by a rule-ordering argument. Not only is backward pronominalization impossible as in (68), but so is forward pronominalization, ((71)). For pseudo-clefts with foci equated with subjects, too, like (69), neither direction of pronominalization is possible where PREDICATE EMPHASIS has applied ((72) and (73)).

(71) * wan Auduⁱ nee wanda yaⁱ dookaa
it was Aⁱ's brother whom heⁱ beat

(72) * wansaⁱ nee wanda ya dooki Auduⁱ
it was hisⁱ brother who beat Aⁱ

(73) * wan Auduⁱ nee wanda ya dookee shiⁱ
it was Aⁱ's brother who beat himⁱ

5.10 A Proposed Cross-over Constraint.

It seems to me that these data are part of a crossover phenomenon like those described in English by Postal (1971). What is relevant is that in these examples an NP crosses a coreferential NP when PREDICATE EMPHASIS switches the subject and predicate of a copular S. But this constraint is too strong: the focus-emphatic S (36), (38), (40) and (42) without relative pronouns clause-heads are grammatical despite the movement of the clause containing an NPⁱ over the focus containing an NPⁱ by EXTRAPOSITION. In this light, the principle governing this phenomenon could be modified as follows: no NP containing an NPⁱ may cross an NPⁱ. This excludes those structures created by EXTRAPOSITION, since this is S-movement: only NP-movement is affected¹⁰. This might be considered a wide-ranging constraint to propose to handle this limited number of examples. Further evidence for this restriction on the crossing of coreferential NP's is presented in Chapter 7, Section , where it is used in support of focus-raising. If it is correct it provides more powerful justification for the claim that PREDICATE EMPHASIS and CLEFT EXTRAPOSITION are two distinct transformations.

10. This is quite different from the constraint proposed by Postal in detail. As with many of Postal's examples, some speakers will reluctantly allow a coreferential interpretation of some starred sentences e.g. (73).

It might be objected that (j), derived from (i), violates this constraint. This is not so since coreferentiality is here asserted between sa and Audu, not presupposed; what has to be presupposed in order for this to be asserted is the coreferentiality of the relative head and sa.

(i) wanda ya dooki wansaⁱ Auduⁱ nee
who beat hisⁱ brother was Aⁱ.

(j) Auduⁱ nee wanda ya dooki wansaⁱ
Auduⁱ be who beat hisⁱ brother

In Part II, several arguments have been presented drawing on evidence about agreement, affecting the Auxiliary pronouns in the focus emphatic clause and the copula following the focus (Chapter 3); about the restriction on the operation of RELATIVE CLAUSE EXTRAPOSITION from the focus in such sentences (Chapter 4),; and about the restrictions on the occurrence of apparently anomalous "backward" PRONOMINALIZATION and REFLEXIVIZATION from the clause on to an element within the focus (Chapter 5). The burden of all these arguments has been that the pseudo-cleft analysis is inadequate to deal with these data, but that a focus-placement analysis in which the corresponding non-emphatic sentence is contained in the deep structure would be adequate. Moreover, the behaviour of emphatic copular sentences with regard to copula agreement and pronominalization has shown them to be derived by a different rule from verbal focus-emphasis, thus undermining Bagari's proposal that the two derivations can be collapsed.

Of the completing focus-placement analyses, focus-raising has been shown in the course of Part II to display a number of advantages over focus-fronting. In Part III which follows, these two approaches will be explored in more depth, in an effort to arrive at a decision as to which is best. The argument will take the form of a defence of focus-raising, following the type of derivation it proposes in three stages: the deep structure and the transition to the intermediate pseudo-cleft structure (Chapter 6); a closer inspection of the relative clause generated at this intermediate stage (Chapter 7),

and finally how this pseudo-cleft structure is related to surface-structure focus-emphatic sentences (Chapter 8), followed by some general conclusions about the theoretical relevance of these arguments (Chapter 9).

PART III

CHAPTER 6 FOCUS-RAISING AND RELATIVE FORMATION6.1. Focus-Raising and Focus-Fronting

In this attempt to justify the focus-raising approach against the focus-fronting approach, I shall turn first to the early stages of the derivation. These are of importance, since it is in them that the focus-raising approach differs from the pseudo-cleft analysis, and upon them that the critique of the pseudo-cleft analysis was built. Firstly, the deep structure itself must be considered: that of the focus-raising approach differs from the focus-fronting approach in having an essentially complex structure, in which the corresponding non-emphatic S is embedded in the subject, and the copula is in a higher sentence. The focus-fronting analysis has a simple deep structure, in which the copula is part of this simple S. The transition to surface structure for focus-fronting is correspondingly simple: the focus element, together with the optional copula, is simply moved to the left-hand side of this S.

The equivalent transformation in focus-raising is FOCUS-RAISING itself, but this moves the focus not to the left within the simple S, but to the right into the higher S. Since what is produced is not surface structure, but an intermediate pseudo-cleft structure, a number of other transformations are needed to reach surface structure. In order to justify this additional complexity as compared with focus-fronting I will give here two arguments against focus-fronting. Further arguments are to be found in Chapter 8.

It is not possible however to provide independent evidence from a differant source in the grammar for FOCUS-RAISING, since it occurs only in the derivation of focus-emphatic (cleft) sentences. The same is true of FOCUS-FRONTING unless it can be shown to be an instance of a more general frontshifting rule, (see Chapter 7 Section 16)

6.2.

Ungrammatical Forward Pronominalization in Focus-Emphatic Sentences.

For the first piece of evidence for focus-raising I return to the themes touched upon in Chapter 5, Sections 6 and 7. It will be recalled that it was mentioned in passing that as well as backward pronominalization from the clause to the focus in focus-emphatic sentences being ungrammatical, forward pronominalization from the focus to the clause is similarly excluded where the focus is equated with the subject, e.g. (1) - (4) (cf. Chapter 5):

- (1) *wan Auduⁱ (nee) yaa dookee shiⁱ
it was A'sⁱ brother who beat himⁱ
- (2) *mai zaagin Isyaakuⁱ (nee) ya yi masaⁱ kasheedii
it was the one who curses Iⁱ who gave himⁱ a warning
- (3) *kwallon da maalamii ya baa Hakanⁱ (nee) yaa burgee shiⁱ
it was the ball that the teacher gave Hⁱ that impressed himⁱ
- (4) *ceewaa Muusaⁱ zai gaa'jee ni (nee) ya baa shiⁱ tsooroo
it was that Musaⁱ will succeed me that frightened himⁱ

The ungrammaticality of "backward" pronominalization where the focus NP is equated with the subject, in contrast to its grammaticality where the focus NP is equated with the object, was accounted for by the fact that a pronoun in the subject NP could not be coreferential to a following NP in the corresponding non-emphatic sentence. This was used as support for incorporating this sentence in the deep structure of the emphatic sentence. In the case of (1) - (4), however, the corresponding non-emphatic sentences (5) - (8) exhibit grammatical forward pronominalization.

- (5) wan Auduⁱ yaa dookee shiⁱ
Audu'sⁱ brother beat himⁱ
- (6) mai zaagin Isyaakuⁱ yaa yi masaⁱ kasheedii
the one who curses Iⁱ gave himⁱ a warning.

- (7) Kwallon da maalamii ya baa Hasanⁱ yaa burgee shiⁱ
the ball the teacher gave Hasanⁱ impressed himⁱ
- (8) ceewaa Muusaⁱ zai gaajee ni yaa baa shiⁱ tsooroo
that Musaⁱ will succeed me frightened himⁱ

The ungrammaticality of (1)-(4) cannot therefore be explained purely on the basis of a deep structure containing (5) - (8), as in either focus-placement analysis. If we consider the pseudo-cleft structure of (1)-(4), which is part of the focus-raising derivation, not of focus-fronting, the full NP follows the coreferential pronoun; the surface pseudo-clefts (9) - (12), which are not intended to be identical with the underlying forms, but which have a parallel structure, are ungrammatical.

- (9) *wanda ya dookee shiⁱ wan Auduⁱ nee
who beat himⁱ was Audu'sⁱ brother
- (10) *wanda ya yi masaⁱ kasheedli mai zaagin Isyaakuⁱ nee
who gave himⁱ a warning was the one who curses Iⁱ
- (11) *abin da ya burgee shiⁱ Kwallon da maalamii ya baa Hasanⁱ nee
what impressed himⁱ was the ball the teacher gave H.ⁱ
- (12) *abin da ya baa shiⁱ tsooroo ceewaa Muusaⁱ zai gaajee ni nee
what frightened himⁱ was that Musaⁱ will succeed me

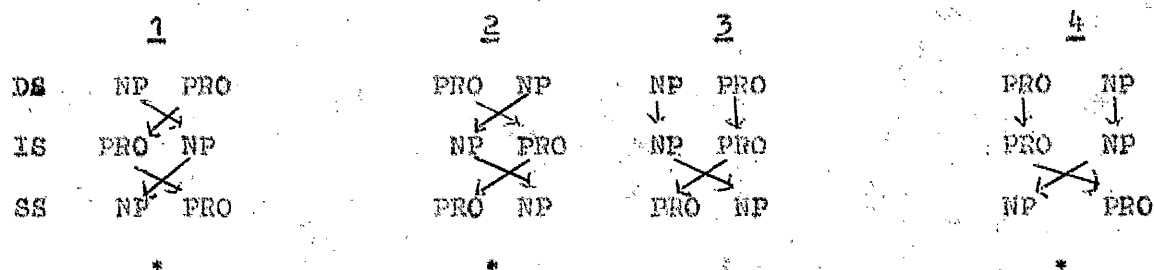
If we compare this with the other cases of pronominalization in focus-^p emphatic sentences using the three stages of derivation given by the focus-raising analysis (viz. deep structure, intermediate (pseudo-cleft) structure and surface structure) an interesting pattern emerges. In the following diagram (13) Column 1 represents the case of a focus which is an underlying subject with forward pronominalization in deep structure, in 2 the focus is the subject and the direction of pronominalization backward in deep structure; column 3 ^{represents} object focus and forward pronominalization, 4 object focus and backward pronominalization.

Only 3 produces a grammatical surface structure.

(13)

Subject Focus

Object Focus



One can immediately see the generalization which can be made from this: only sentences in which both the deep and intermediate structures have forward pronominalization are grammatical. It is not possible to state this using the PRONOMINALIZATION transformation alone: once it has applied correctly, as in (13), 1, it cannot be used to filter out subsequent ungrammatical structures further on in the derivation.

Recognizing this limitation on the function of transformations, there are two main ways in which the above data can be described. One has already been used at the end of Chapter 5 to account for the restrictions on the crossing of coreferential NP's. Given that 1 and 3 are the only derivations with well-formed deep structures, the difference between them is that in 1, as distinct from 3, the NP crosses over the coreferential PRO to create the intermediate structure. This is the result of FOCUS-RAISING raising the subject NP which contains the coreferential NP across the object NP into the higher S, as in (14) which underlies (1).

account for the difference in coreferentiality in pseudo-clefts and inverted pseudo-clefts which have undergone PREDICATE EMPHASIS, as this transformation takes place in a simple S on a single cycle. The above crossing constraint is ^{therefore} preferable.

What is important to note is that focus-fronting cannot make any generalization of an equivalent kind to the above concerning the ungrammaticality of pronominalization from a subject focus. According to this analysis, the left hand subject is merely displaced further to the left in the simple emphatic sentence; there do not seem to be any grounds for loss of grammaticality in this process.

6.3. Forward Pronominalization from the Focus.

A second difficulty for focus fronting is the fact that not only may an NP in the focus be pronominalized by an NP in the clause, but at the same time the whole focus NP may pronominalize the identical NP in the clause. e.g.

- (15) [wan [sa¹]]^j nee Audu¹ ya kee waasaa da shii^j
 it was [[his]¹ brother]^j that A.¹ was playing with him^j

Pronominalization rather than deletion of the NP in the clause identical to the focus occurs under conditions exactly the same as those where the identical NP in a relative clause is pronominalized, not deleted, by the head. In focus-raising, this is explained by the fact that the clause in a cleft is a type of relative clause. Under certain circumstances, described in Chapter 7, Section 11, the NP in the relative clause is copied, not chopped, to the left. When this happens, PRONOMINALIZATION changes the right-hand NP into a

pronoun. The PRONOMINALIZATION transformation which creates sa in (15) takes place on the lower cycle, and PRONOMINALIZATION which creates shii on the higher cycle in conjunction with the relativization rules². In the focus-fronting approach, however, both these applications of PRONOMINALIZATION must be on the same cycle, one before and one after the "copying" variety of FOCUS-FRONTING; this is a highly undesirable conclusion. The only answer might be to regard replacement by a pronoun of a moved constituent as a part of such a transformation, or a general convention on the operation of such transformations, rather than an instance of PRONOMINALIZATION. This has been suggested by Chapin (1970) and put into practice by a number of linguists.

6.4. RELATIVE FORMATION in Headless Relative Clauses.

In the derivation of surface structures of the form NP - (Cop) - Clause from a deep structure incorporating the corresponding non-emphatic sentences, at some stage the clause acquires the form of a relative clause without the (PRO +)da relativizer. The form of this clause is fully discussed in the following chapter, together with some remarks about how focus-fronting might handle these data. Here, though, my concern is to show how the clause acquires this form after FOCUS RAISING has applied.

I have assumed here that when an element is raised by FOCUS-RAISING, some kind of pronominal element replaces it. This element is marked $\begin{bmatrix} -\text{SPEC} \\ + \text{WH} \end{bmatrix}$: this is admittedly a rather ad hoc characterization of its properties, although as we shall see later, there is a case

2. The formulation in Chapter 7 is that RELATIVE DELETION applies to the right-hand NP in the Clause (which has been marked $\begin{bmatrix} + \text{WH} \end{bmatrix}$ by FOCUS-RAISING) under certain conditions; if these conditions are not met PRONOMINALIZATION applies to it since it is identical to the copy under Comp (frontshifted by RELATIVE FORMATION).

for regarding it as the same as the source of "any"-koo-words, and interrogative words. This $\begin{bmatrix} -SPEC \\ +WH \end{bmatrix}$ element is shifted to the left of the clause under the Comp node which on this occasion dominates NP by the same process as takes place when relative clauses with heads are formed i.e. RELATIVE FORMATION (for further details see Chapter 7). In the case of relative clauses with heads it is normally said that the process is triggered by the identity of the head NP and an NP within the clause. In this case the conditions can be said to involve either the non-distinctness of the dummy-head and the +WH element, or, as I propose in Chapter 7, Section 2, the nature of the latter element itself.

While this description is vague, it is no more so than the attempts of Akmajian, or Chomsky to fit clauses with a head it and a non-specific WH-element in the clause into a relative clause pattern. What I wish to do in this section is to show that the formation of headless relative clauses from the structure $NP \left[\Delta \begin{bmatrix} S \begin{bmatrix} X & Y & Z \end{bmatrix} S \end{bmatrix} \begin{bmatrix} -SPEC \\ +WH \end{bmatrix} \right] NP$

is not an isolated phenomenon confined to cleft sentences, but occurs in at least one, and possibly a number of other constructions in Hausa. The meaning of such clauses is also substantially different from that of normal relative clauses with heads.

6.5. Indirect Questions

The clearest example of such relative clauses is the type of relative clause which is used synonymously with indirect questions, which I shall call for convenience IQ clauses³. In Hausa, however,

3. Baker (1968) calls these "concealed questions", according to Faraci (1971).

this is not the only way of expressing the meaning of an indirect question: there is also the more familiar device of embedded questions, although as was pointed out in Chapter 1, special questions in Hausa have the same form as focus-emphatic sentences. Also the question particle (complementizer) koo - "whether"⁴, which may be the initial element in non-embedded general questions, but is never used in non-embedded special questions, becomes ^{obligatory} in embedded general questions, and optional in embedded special questions.

(16) (koo) sun faara aikii a hanyaa?
have they started work on the road?

(17) (*koo) inaa (nee) suka faara aikii?
where (b) have they started work?

4. The morpheme koo has many functions in Hausa, meaning "or", "even", "even if", as well as its use in koo-words (see this Chapter Section 8, and Chapter 8, Section 7), and as an interrogative marker after the question. It is likely that the either/or and the two interrogative functions are related in that yes/no questions are derived from the structure koo S koo neg S - either S or not S. The second S may be reduced to koo baa haka ba? - "or not so?" (haka being a pro-S) and then further to simply koo? The first koo is usually dropped, as in disjunctions of NP's. There may be a deeper connection between this disjunctive function and the any, every and -ever variable function. The indirect question and "-ever" koo + WH-word are tonally distinct in surface structure, however, e.g.

(A) Kóo mée ka ɓataa, baa zai daamee ni ba
whatever you lost (i.e. the thing) it won't bother me

(B) Kóo mée ka ɓataa, baa zai daamee ni ba
(the question of) what you lost won't bother me

This may mean that kóo in -ever clauses is attached to the NP, and in indirect questions to the S. In the former case the tone of mée is raised to the high level of kóo. It is interesting that where a preposition intervenes between koo and the WH-word in -ever clauses, this tone-raising rule does not apply. e.g.

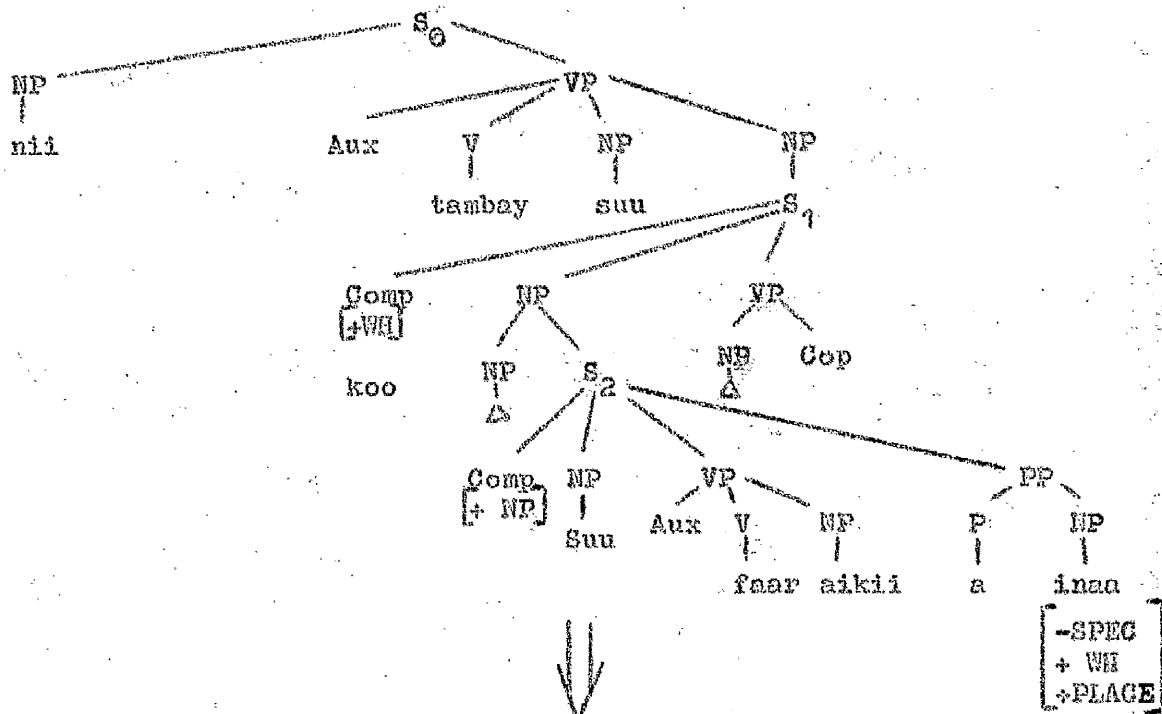
(C) yaaroo kóo dà mée ka zoo an fii ka
boy, whatever you come with you are exceeded

- (18) naa tambayee su koo sun faara aikii a hanya⁵
I asked them whether they had started work on the road
- (19) naa tambayee su (koo) inaa (nee) suka faara aikii
I asked them where they had started work

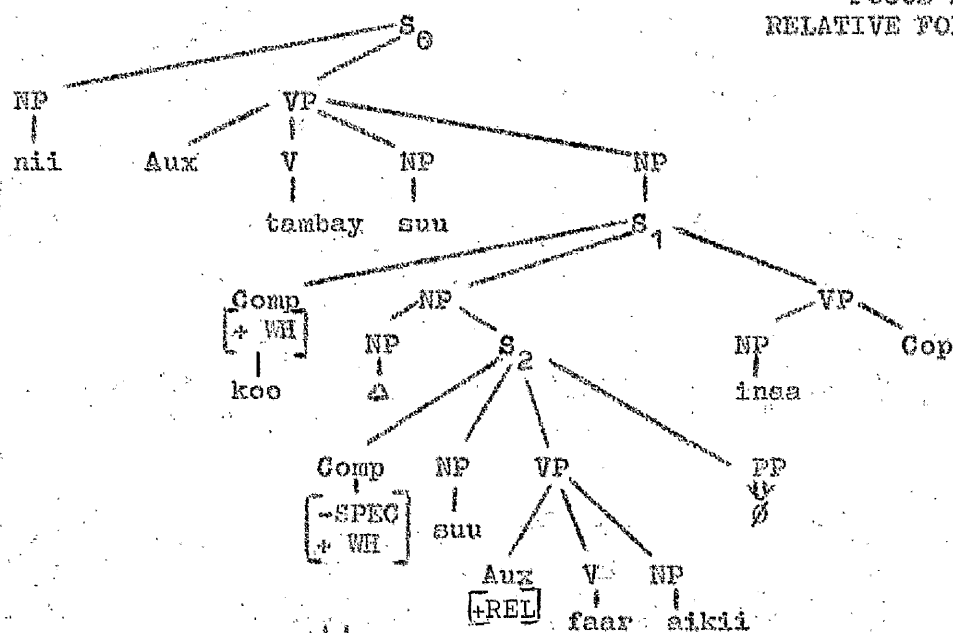
According to the focus-raising derivation, the deep-structure of (19) is (20); FOCUS-RAISING and RELATIVE FORMATION produce (21), then EXTRAPOSITION, COMP-DELETION in S_2 and the automatic deletion of the embedded subject produce (22). COP-DELETION and COMP-DELETION in S_1 (which erases koo) then apply optionally.

5. Yes/no questions have a rising intonation with a marked fall at the end, whereas special questions have no rise. Embedded yes/no questions may or may not have a rising intonation.

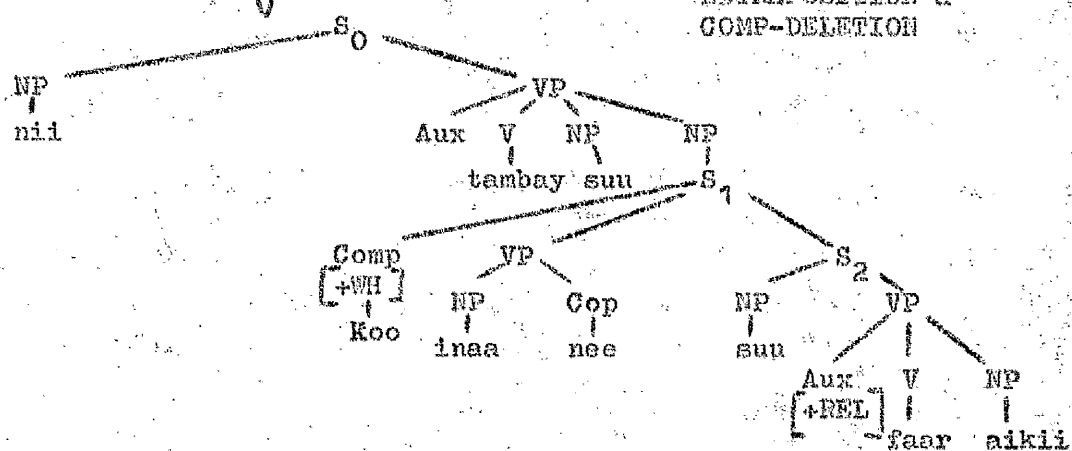
(20)



(21)

FOCUS RAISING &
RELATIVE FORMATION

(22)

EXTRAPOSITION &
COMP-DELETION

6.6. "Indirect Question" Relative Clauses

Alternatively, the indirect special questions may take the form of a relative clause, as in (23), which has the same meaning as (19), and (24) and (26), which have the same meaning as (25) and (27) respectively;

- (23) naa tambayee su inda suka faara aikil
I asked them where (the place that) they began work
- (24) ba ka san hanyar da Muusa ya bi ba
you don't know the road that Musa followed
- (25) ba ka san (koo) wace hanyaa (cee) Muusa ya bi ba
you don't know which road Musa followed
- (26) sai ku yi shaawaraa a kan wanda zaa a baa aikin
you must deliberate about the one one will give the job to
- (27) sai ku yi shaawaraa a kan koo waa (nee nee) zaa a baa aikin
you must deliberate about who one will give the job to

The indirect question interpretation is only one of the possible readings associated with the relative clauses in the above sentences.

of (23) and (24)

In the indirect question reading₁, what is not known by the subject is the specification of the identity of the object relative clause; on the other interpretation (that of a normal relative clause), on the other hand, the identity of the object NP is not what concerns the subject; what is in question is the properties of that specific entity. Thus the meaning of (23) on the latter reading is "I asked them about the place where they started work", that of (24) "I presuppose that you know the identity of the road M. followed; I assert that you are not personally acquainted with its nature"; in (26), under the non-IQ relative clause interpretation, it is presupposed that the person has already been selected for the job; what is to be discussed is some aspect of his person, not a decision about who is to be selected.

This type of ambiguity only occurs with a certain set of verbs, but this does not mean that these verbs carry this ambiguity in their own lexical entry. Rather, the ambiguity arises from the fact that this set of verbs may take either non-sentential NP's (including NP's with relative clauses) or embedded questions as objects. It is this distinction which makes the semantic difference between "I know, tell me etc. some properties of X, (a constant)," and "..... the value of X (a variable)". It does not matter whether these two formulations can be collapsed in philosophical terms; in natural language, e.g. Hausa, they are distinct. The problem is to represent this distinction in underlying syntactic structure, and at the same time to convey the resemblance in underlying structure of IQ relative clauses and indirect questions.

The IQ relative clause has the same meaning as the subject relative clause in the pseudo-cleft structure which is synonymous with the focus-emphatic structure. The NP in the predicate of pseudo-cleft clauses thus specifies the identity of the variable signified by the subject: it is what is called an identificational or equational copular sentence. It is not concerned with asserting some of the properties of a constant subject, as in a descriptive copular sentence: this would be the case if the subject of the sentence were a normal, not an IQ, relative clause. CLEFT EXTRAPOSITION can only take place where the subject relative clause is of the IQ type, e.g. in (29) the reading may only be the (a) reading of the pseudo-cleft (28).

- (28) abin da na ganii kooree nee
 { (a) what I saw (variable) was a green one }
 { (b) what I saw (constant) was green. }

- (29) kooree nee na ganii
 { (a) a green one (be) I saw }
 { (b) * green (be) what I saw }

Here, again, there is a contrast with the behaviour of PREDICATE EMPHASIS which reaffirms its distinctiveness with regard to EXTRAPOSITION: (30) may have either the IQ or normal relative clause reading, like its source (28)

- (30) kooree nee abin da na ganii
 { a green one (be) what I saw (variable)
 green (be) what I saw (constant) }

Apart from these semantic considerations, there is syntactic evidence that IQ and other relative clauses are of separate kinds.

(a) If a definite determiner e.g. ɗɗ or ɗɗ nan "that" is added to a relative clause it may not have an IQ (variable) interpretation, but must have a normal (constant) interpretation. e.g.

- (31) ba ka san hanyar da Muusa ya bi ɗɗ nan ba
 { *you don't know that road M. took = what road M. took
 you don't know that road that M. took }

If such a clause has any IQ interpretation, the ɗɗ nan makes specific the action of following, not the road followed.

(b) An IQ relative clause may not be pronominalized, whereas other relative clauses may e.g. in (32), where hanyar da Muusa ya bi is a left dislocated topic, there would normally be a pronominal copy in the following clause. This is impossible if the topic relative clause is an IQ. Similarly in (33), where in the non-IQ interpretation a pronoun would usually replace the coreferential NP in the embedded S, pronominalization is impossible.

- (32) hanyar da Muusa ya bi, ba ka san ta ba
 { *the road Muusa took, you don't know it i.e. which it was
 the road Muusa took, you don't know it i.e. are not familiar with that road. }

- (33) ba ka san hanyar da Muusa ya bi ba, keo da ya ke, nii nas san ta
 { *you don't know the road M. took, although I know it. i.e. which it is
 you don't know the road M. took, although I know it. i.e. that (known) road }

In fact deletion rather than pronominalization is the exponent of anaphora for IQ clauses as in (34) and (35). In this respect, IQ relative clauses work like embedded S (pronominalization of which is also impossible), i.e. complements as in (36) or embedded questions as in (37), rather than non-sentential NP's.

- (34) hanyar da Muusa ya bi, ba ka sani ba
the road Musa took you don't know i.e. which it is
- (35) ba ka san hanyar da Muusa ya bi ba, koo da ya ke nii naa sani
you don't know the road that M. took, although I know i.e. which it is
- (36) ceewaa Muusa yaa bi hanyar nan, naa sani
that Musa followed that road, I know
- (37) koo Muusa yaa bi hanyar nan, ba ka sani ba
whether Musa followed that road, you don't know

If these two arguments were all, it could be concluded that IQ relative clauses merely differ in the feature composition of their head NP's from other relative clauses. Note, though, that the relevant distinction cannot be $[+SPEC]$, since $[-SPEC]$ NP's, which would include IQ relative clauses in this view, may be pronominalized in Hausa, unlike in English, as pointed out in Chapter 5, Section 1, 6. e.g.

- (38) zan sayi wata farar riigaa in naa gan ta
I shall buy a white gown if I see it (= one)

But there is in addition further evidence which shows that the underlying structure of IQ relatives differs from that of other relatives.

(c) Where a relative clause contains another relative clause which contains the NP identical with the head in deep structure, and the relative clause embedded in the higher relative clause may take either an IQ or a "normal" interpretation, then the IQ interpretation is preferred. Such a sentence given a "normal" interpretation is

regarded as odd. e.g.

- (39) hanyar da ba ka san wanda ya ginaa ta ba taa yi kyau
 { the road which you don't know who built it is fine
 ?the road which you don't know the one who built it is fine }

Now while it would be a mistake to place much reliance on this kind of data, it does seem significant that there should be a variation in acceptability between two constructions which are identical in surface structure. As is shown in Chapter 7, whether the rule of RELATIVE DELETION (involving deletion of the identical NP in the clause) or simply the rule of RELATIVE FORMATION (involving pronominalization of the NP)⁶ applies depends on a complex condition involving the factors of the presence of heads in NP and subject position (see Chapter 7, Section 15 for details). Both of these factors tend to make "chopping" impossible, as in (39). Further, these same factors tend to lessen the acceptability of the sentence even where "copying" applies. I am unable to discover exactly how this operates in this case, but I would guess that in some way the IQ relative clause is less sensitive to this factor than a fully-fledged relative clause with a head, because possibly it has no head.

6.7. Pied-Piping in IQ Relative Clauses.

(d) The surmise that this type of clause has no head is confirmed by the following observation. In Chapter 7 it is shown that only simple PP's in Hausa are subject to "Pied-Piping" (i.e. left-movement of a constituent containing the [+WH] NP) of the type (1) by "chopping" RELATIVIZATION, and of the simple PP's only those with ta - "through" and daga - "from" show up clearly in surface structure

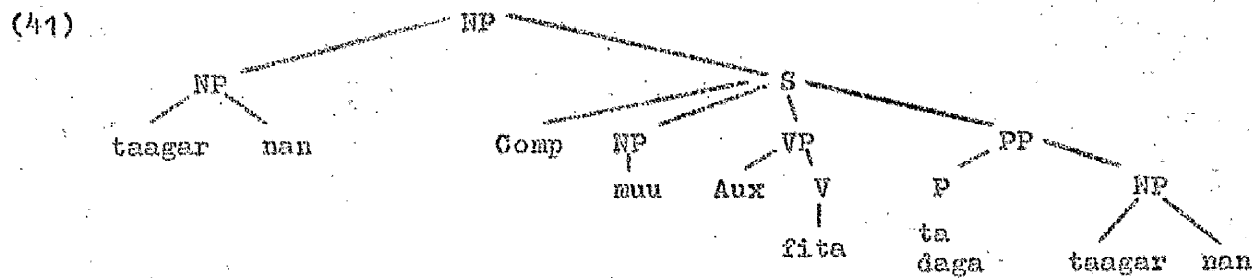
6. i.e. in simpler terms the choice between "chopping" and "copying" (Ross 1967).

without deletion of the preposition. Hence we find:

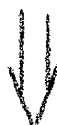
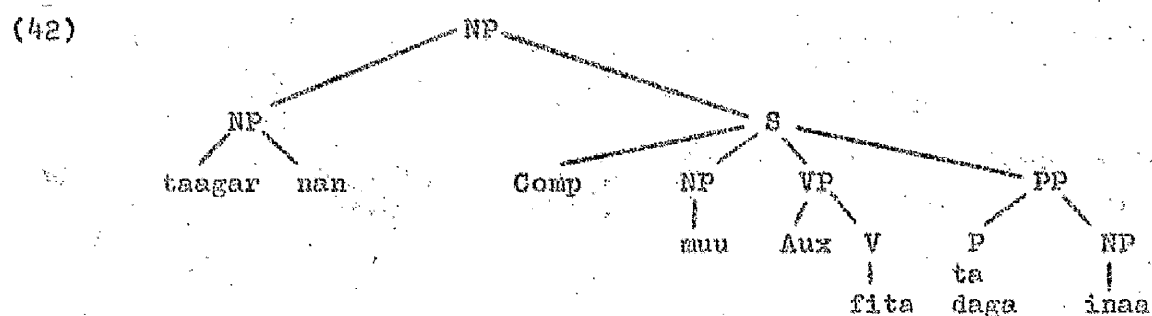
(40) taagar nan $\left\{ \begin{array}{l} \text{ta} \\ \text{daga} \end{array} \right\}$ inda zaa mu fita taa yi kadan

that window $\left\{ \begin{array}{l} \text{through} \\ \text{from} \end{array} \right\}$ where we shall go out is too small

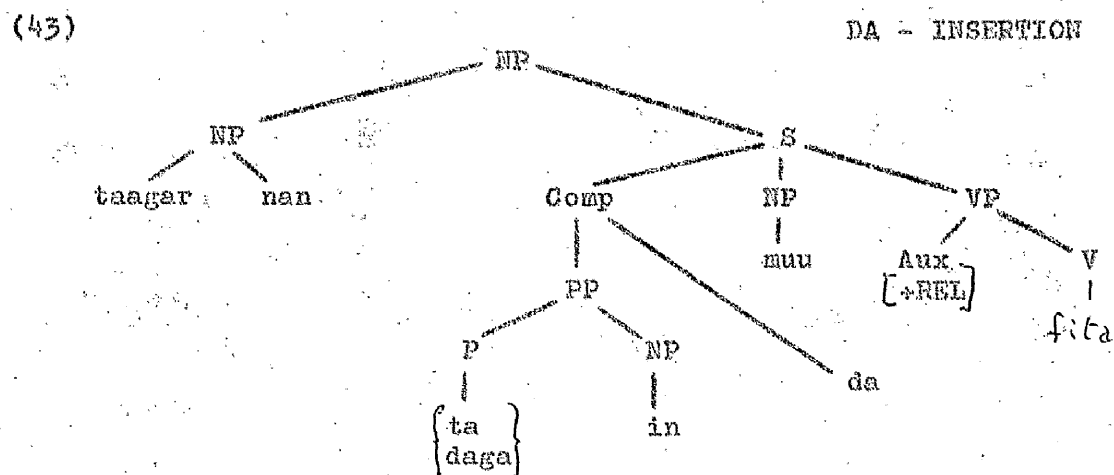
According to my analysis, the derivation of the relative clause works as follows: in (41) the deep structure, $\left\{ \begin{array}{l} \text{ta} \\ \text{daga} \end{array} \right\}$ taagar nan is the PP on the right-hand side of the S; WH-ATTACHMENT then changes taagar nan into a WH-pronoun (inaa in this case since it is a Place NP), and RELATIVE FORMATION then applies, moving the whole PP to the left under Comp, and RELATIVE DELETION deletes the right-hand pronoun; then da is inserted, and the relative pronoun acquires the form in-da. (For details of this view of Relativization, see Chapter 7).



WH-ATTACHMENT

RELATIVE FORMATION &
RELATIVE DELETION

DA - INSERTION



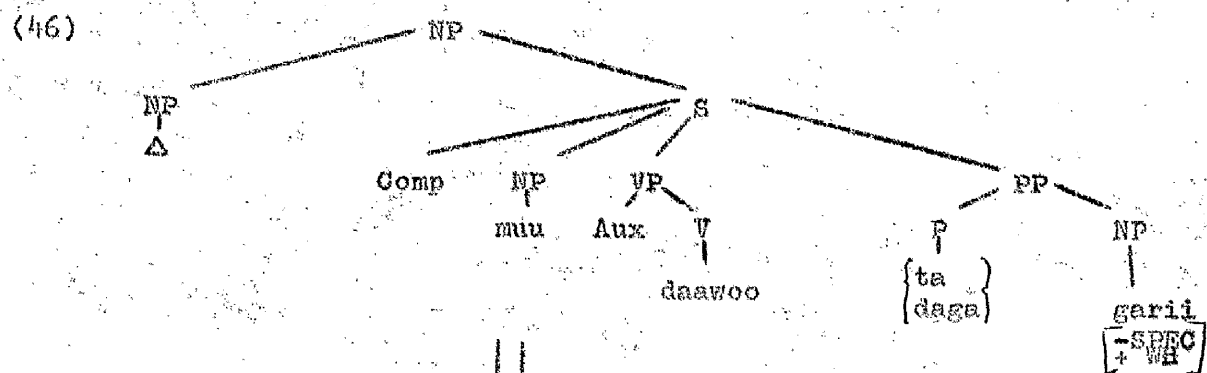
But when we turn to IQ relatives, a different pattern is found with Pied Piping. Relative clauses of the form head NP {ta daga} - PRO - da - clause cannot have an IQ interpretation.

- (44) ba ka san garii {ta daga} inda muka daawoo ba
 you don't know the town {through from} where we came back

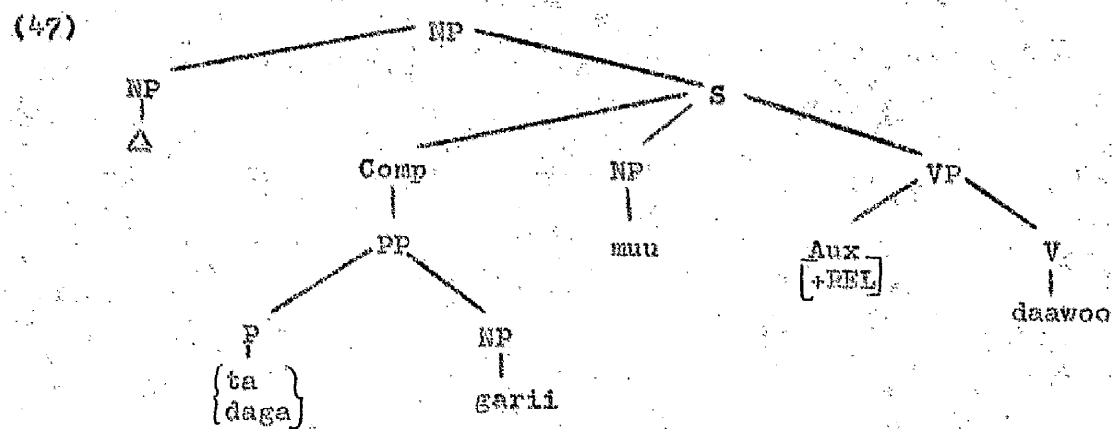
This is an awkward sentence, since copying is more likely to be used, but its meaning can only be that the town is a constant, not a variable. If a variable IQ meaning is intended and chopping is used the ordering must be {ta daga} - "head NP" - da, as in (45), which has no constant non-IQ reading:

- (45) ba ka san {ta daga} garin da muka daawoo ba
 you don't know {through from} the town that we came back
 i.e. {through from} which town we came back

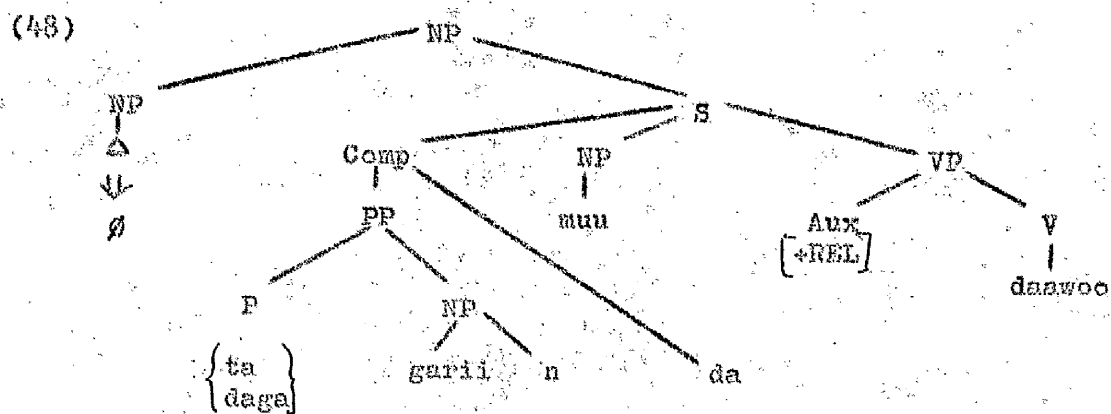
If garin is regarded as the "head NP" here it is extremely difficult to account for the strange ordering of the preposition from the embedded S before it, except by an ad-hoc movement rule which provides no explanation of the difference of interpretation of (44) and (45). On the other hand, if we adopt the proposal indicated above, that IQ relative clauses have no head in deep structure (or rather a dummy head which is subsequently deleted), then the derivation proceeds without trouble to the correct surface structure. If (46) is the deep structure, RELATIVE FORMATION applies to form (47), on the basis of the [-SPEC] feature on garii itself or its article. Since the head is empty, it cannot reduce garii under Comp to a PRO-form, so garii remains intact, simply adding da preceded by the referential -n as is normal in the case of restrictive relatives ^{to produce} (48).



RELATIVE FORMATION



DA- INSERTION



It is now possible to see why the semantic interpretation of embedded questions as in (19) is equivalent to that of IQ relative clauses as in (23), although they have different structures. Consider (20) which is the deep structure of (19). In S_1 , the subject NP has exactly the form of an IQ relative clause, as outlined above, i.e. a headless relative clause containing a $\begin{bmatrix} -SPEC \\ +WH \end{bmatrix}$ NP. Apart from this relative clause there is only one other meaningful element in S_1 : the copula. The only semantic information which the embedded question structure NP $\begin{bmatrix} S_1 \end{bmatrix}$ NP adds to the subject NP within it is that of focus i.e. a difference in emphasis, not in content.

6.8. IQ Relative Clauses in Negative Existential Sentences

It was noted in Section 6.7 that where a $\begin{bmatrix} -SPEC \\ +WH \end{bmatrix}$ is the subject of a negative sentence, it may not be converted into a *koo*-word, but the sentence must be replaced by one of the form *baabu (baa) + relative clause*. But even where a *koo*-word can occur, as in (49), there is still a synonymous sentence of the form *baabu (baa) + relative clause*, like (50).

- (49) Audu bai ji koowaa a zauree ba
A. did not hear anyone in the entrance hut

- (50) baiwanda Audu ya ji a zauree
there was not one who A. heard in the entrance hut (= (49))

Since there is a systematic relationship of synonymy between these sentence-types, they should be related in the grammar.

The relative clauses in sentences like (50) clearly do not refer to an entity whose identity is established, i.e. what I have called above a constant. Of course, such an interpretation would be semantically anomalous in this context anyway as the sentence asserts the non-existence.

of the entity. This fact however does open up the possibility that they are variable i.e. IQ clauses⁷. This contention is supported by the fact that they share the $\begin{bmatrix} -SPEC \\ +WH \end{bmatrix}$ features of the koo-words with which they are correlated in sentences like (49), and by the fact that these clauses exhibit criteria (a) and (b) of IQ relative clauses, i.e. they admit of no qualification by definite determiners, and they are not susceptible to pronominalization.

- (51) *baa wanda Audu ya ji a zauree \int n nan
there is not that one which A. heard in the entrance hut

- (52) *wanda Audu ya ji a zauree, baabu shii
the one that A. heard in the entrance hut, there is not him

(this could only mean "A. heard a specific person, but he is not present here and now").

If we can now assume, on this rather sketchy basis, that these clauses are indeed headless relative clauses, we can go on to relate the sentences (49) and (50) transformationally. This derivation would require elaborate justification, which I cannot attempt here, since it is necessary to take the controversial position that all negation derives from a negative element in a higher sentence,

7. The extension of the notion of variable relative clauses is rather speculative, especially as it involves derivations of all negative sentences from structures containing $NP \begin{bmatrix} -S \end{bmatrix} NP$. It should not be considered a crucial part of the main argument. It also serves to clarify some points made in Chapter 4, Section 6.

specifically for Hausa, the negative existential baabu.⁸ Accepting this claim for the sake of argument, a deep structure (53) can be proposed which is the source of both (49) and (50). In the case of (50), the derivation is brief: RELATIVIZATION applies moving the [-SPEC +WH] element to the left and making the normal changes associated with relative clauses, ending up with the surface structure (54). For (49), the derivation is more complex but does not require the use of any rules which have no independent justification. First, RAISING-TO-SUBJECT⁹ applies, raising the subject NP of the embedded sentence

8. There has been some discussion of negative elements in Hausa recently. Eulenborg (1971) analyses baabu as resulting from a transformation which combines the two elements bāa and bā, and Newman (1971) regards bāa ... bā as cognate with other two-part negative markers found in Chadic languages. The present suggestion tends to the converse view i.e. the derivation of bāa ... bā from baabu. From a historical viewpoint, it seems fairly clear to me that baabu/baai is a Kanuri loan-word. Kanuri bāgō (pronounced bā'ō or bā'ò) and its short form bā are used exactly as in Hausa, as a negative existential predicator, and with the negative progressive tense (the other tenses, as in Hausa, having a different neg marker). Exactly the same sound change between Kanuri and Hausa is observable in the pair Kanuri agō (āō), Hausa ābū - "thing". The short form bāa is much more likely to have resulted from the loss of the velar fricative in Kanuri than of the bilabial plosive (which was probably inserted later) in Hausa.

9. This is intended to be the same transformation as that referred to in Chapter 7 Note 9 which converts (D) to (E)

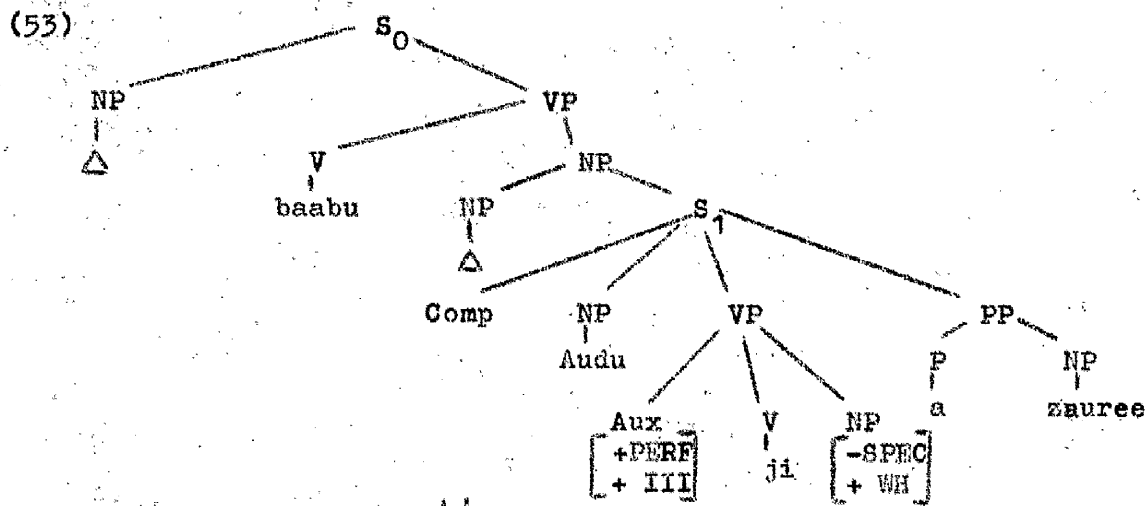
(D) Kande taa zoo yaa kasancee
that Kande came happened

(E) Kande taa kasancee taa zoo
Kande happened to come

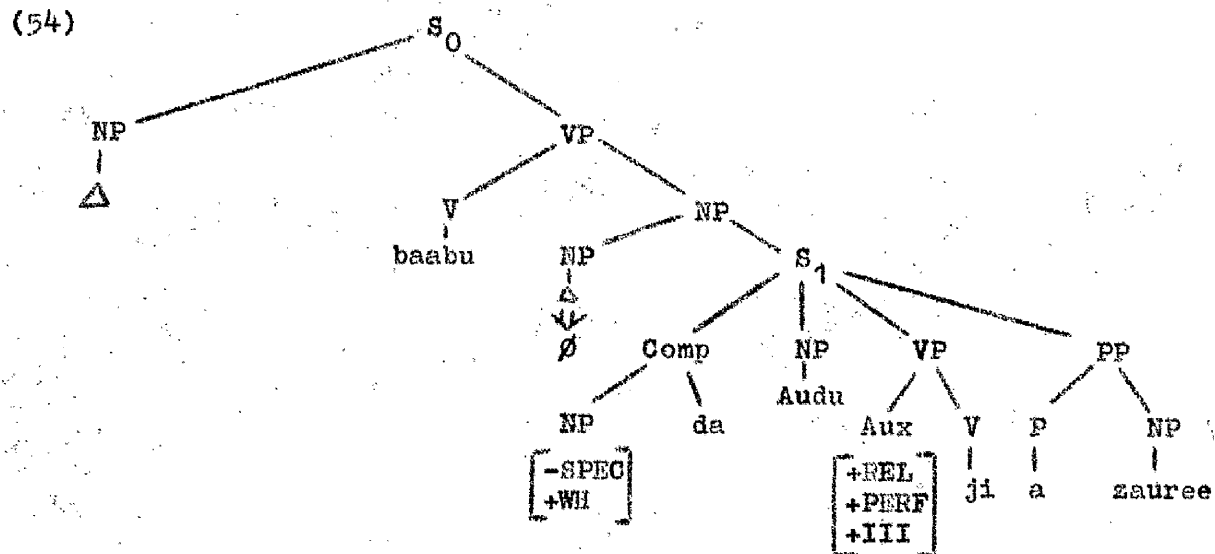
Appendix I

This rule is also discussed in Chapter 4 Section , as possibly forming part of the derivation of sentences involving the naa/kee/ke Auxiliary. The present application of the rule is peculiar, in that it requires the raising of the subject from NP [NP S]_{NP}, not, as usual NP [Det N S]_{NP}.

into the empty subject node of the higher sentence, and attaching the lower S to the higher VP, producing (55). Then NEG-DISTRIBUTION applies, removing baabu from its post-subject position, attaching baa as a left daughter of AUX and ba as a right daughter of S. KOO-WORD FORMATION also applies, giving (56). Late rules then modify the form of the negative AUX. In the case of progressive, possessive and locative sentences, NEG-DISTRIBUTION does not apply in this way, but instead a single baa is attached to AUX. The details of the derivations of the surface forms of these sentences need not concern us here, however.

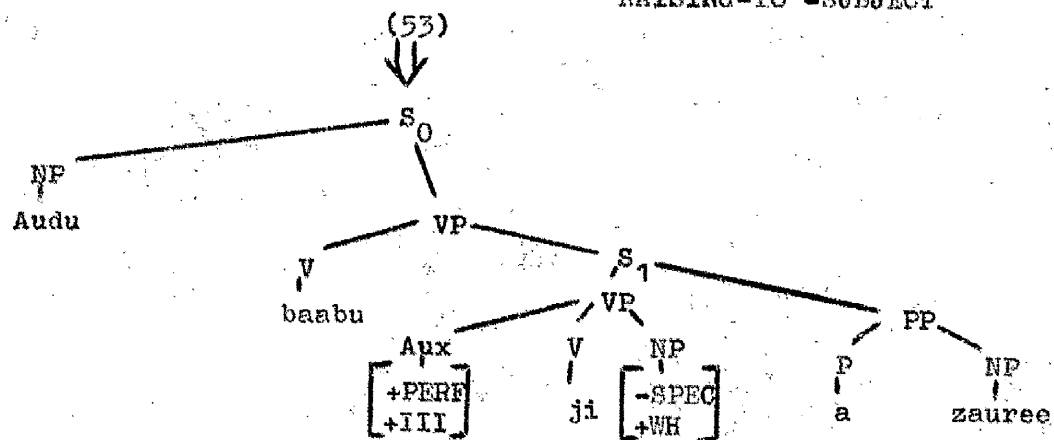


RELATIVE FORMATION



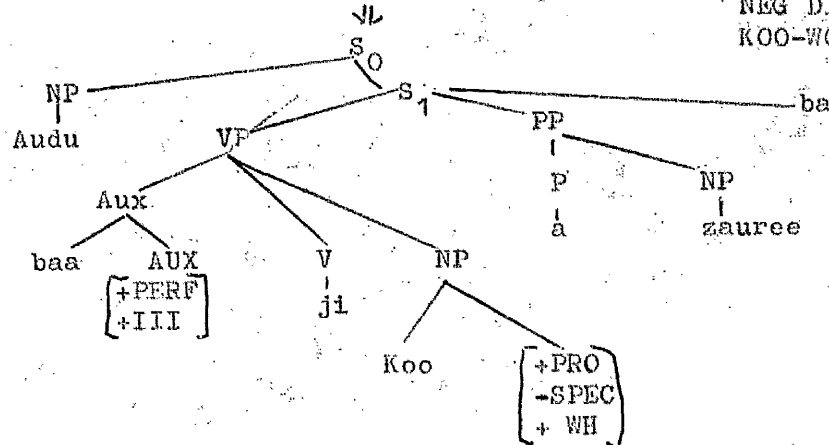
(55)

RAISING-TO -SUBJECT



(56)

(55)

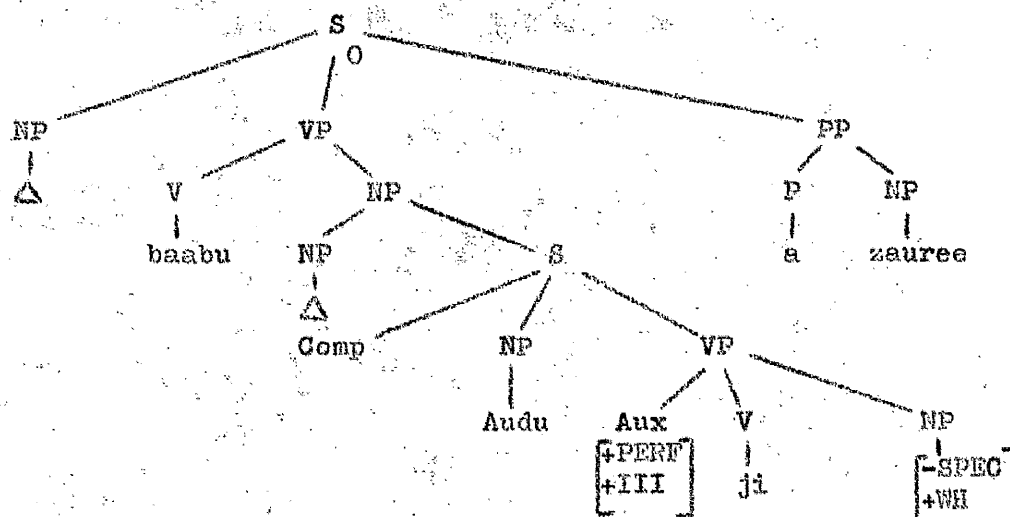
NEG DISTRIBUTION
KOO-WORD FORMATION

This derivation of negative sentences which have hitherto been considered simple may serve to explain the semantic effect of the position of the second ba mentioned in Chapter 4, Section 6, although there are difficulties with this approach which are noted at that point. Also, the position of ba does not always affect meaning, so that ba preceding an S-daughter would be the result of RIGHT-SHUFFLE in many cases. But where it does affect meaning, it might be possible to say that where elements follow ba they are originally daughters of the higher negative S, and where they precede, they are originally daughters of the embedded S. Thus for sentence (57)

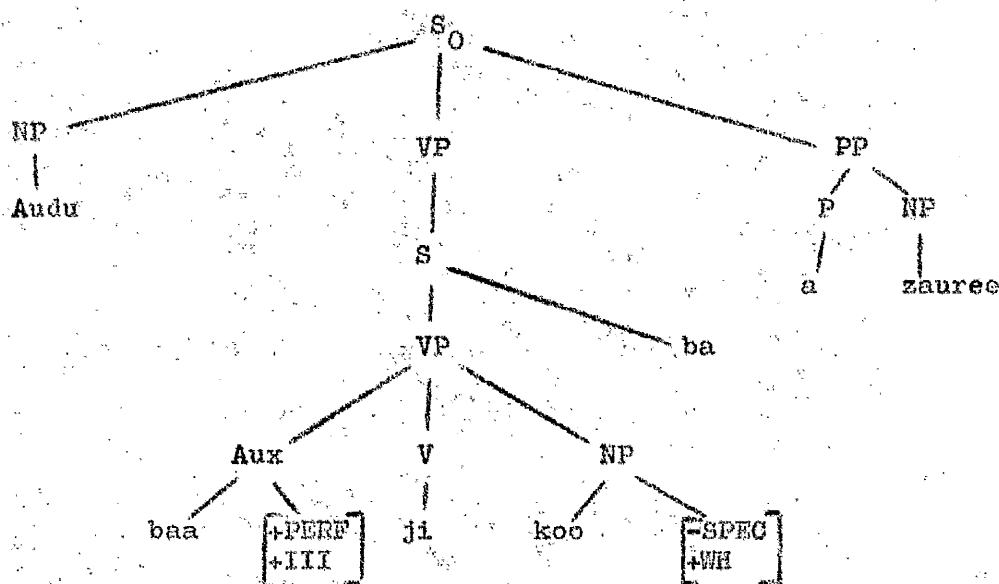
- (57) Audu bai ji koowaa ba a zauree
A. heard no-one in the entrance hut

the deep structure would be (58) and the surface structure (59) in contrast to (53) and (56) for (49), which has the ba in rightmost position.

(58)



(59)



The deep structure now reflects the subtle difference of meaning between (49), which means approximately "there was no instance of Audu-hearing-someone-in-the-entrance-hut", and (57) "in the entrance-hut, there was no instance of Audu-hearing-someone". The difference is perhaps easier to understand in the case of causal

clauses e.g.

(60) Audu bai tafi gidaa saboo da yaa gaji ba
A. did not go home because he was tired.

(61) Audu bai tafi gidaa ba saboo da yaa gaji
A. did not go home because he was tired.

(60) means "A-going-home-because-he-was-tired" did not happen - hence the reading that he did go home for another reason is a possible, although not the only, reading. (61) on the other hand means "because A was tired, A.-going-home did not happen", which unambiguously asserts that he ^{did not go} ~~went~~ home¹⁰.

10. Unfortunately the English translation is also ambiguous. The most striking ambiguity is that the English sentence is that one reading asserts that A. went home, another that he did not. In Hausa while (60) (and not (61)) may bear the interpretation that A. went home, this would more normally be rendered by the focus-emphatic sentence (F).

(F) baa saboo da yaa gaji (nee) Audu ya tafi gidaa ba
it wasn't because he was tired that A. went home

There is a further rather strange and, I think, archaic type of sentence which may be related to headless relative clauses e.g. (F) with kada the neg. marker used with subjunctives, followed by a relative clause with a subjunctive AUX. As far as I know, this is the only example of the prohibition on a subjunctive AUX in the top S of relative clause being contravened.

(G) kada wanda ya shiga nan!
let not the one who enter here! (=let no-one enter here)

This is synonymous with (G), containing a koo-word.

(H) kada koowa ya shiga nan!
let not anyone enter here!

Now the grammaticality of (F) may be explicable by regarding the wanda..... clause not as a normal relative clause, derived from a deep structure, but rather as derived from a headless deep structure. kada might have originally behaved like ban da governing both non-sentential NP's and subjunctive complement S.

It has been noted by a number of writers that pseudo-cleft and cleft sentences are semantically related to special questions, and attempts have been made to relate them syntactically to embedded questions (e.g. Faraci 1971). I have been able to show here that the "concealed question" or IQ relative clause in Hausa can be treated as distinct from the normal relative clause in containing a $\left[\begin{smallmatrix} -SPEC \\ +WH \end{smallmatrix} \right]$ element in deep structure, and having no head. This type of IQ structure conveys the meaning of the subject of a pseudo-cleft sentence much better than a normal relative clause. Further such a structure can be related to a deep structure containing the corresponding non-emphatic sentence by a transformation FOCUS-RAISING. Direct evidence for this rule is rather scant, although two points have been adduced in its favour here concerning the behaviour of PRONOMINALIZATION. However, the arguments for COPULA DELETION in Chapter 3 do provide indirect support for this position, since they indicate that the structure of focus-emphatic S must be a copular S at some stage in the derivation. Focus-fronting does not exhibit any copular sentence in the type of derivation it proposes, and the derivation from pseudo-clefts, which does, has already been rejected in Part II. This points towards a derivation involving FOCUS-RAISING. Focus-raising also represents the meaning of focus-emphatic sentences directly at the pseudo-cleft stage, whereas focus-fronting requires a more complex type of semantic interpretation, in which the element in left-most position is assigned an interpretation identified with the value of a variable relative clause represented by the clause.

CHAPTER 7. RELATIVIZATION

7.1. Relative Clauses and Focus-Emphatic Clauses.

Despite the absence of the initial relative marker $\left(\begin{smallmatrix} \text{PRO} \\ [+WH] \end{smallmatrix} \right) \text{dà}$ the "clause" in focus-emphatic sentences shares many characteristics with relative clauses. The aim of this chapter is to show that the behaviour of clauses in focus-emphatic S and that of relative clauses are exactly the same with regard to two syntactic criteria: (a) the restrictions on the modal properties of the clause (i.e. whether these are verbal or copular, and what types of Auxiliary may occur); and (b) the conditions on the type of anaphora (i.e. deletion or pronominalization) which affects the NP identical to the focus or head in the clause. It is then necessary to explain why this parallel behaviour occurs, and how the process of the formation of relative clauses may best be described to capture the generalization arrived at.

Two types of generalization may be advanced to explain these data. If the pseudo-cleft or focus-raising approach is adopted, the explanation is simple: the clause in focus-emphatic S shares the characteristics or a relative clause, since it is a type of relative clause. In order to equal the simplicity of this proposal, the focus-fronting approach would have to extend Schachter's original formulation¹ and claim that the same frontshifting rule is responsible for movement to the left in both focus-emphatic and relative S. This is by no means out of the question but there is some evidence, presented in Section 1, that it is not correct.

1. In Schachter (1966) an element rel is added to the left of the clause by the emphasis transformation which presumably triggers later rules which convert the Auxiliary into the appropriate form. A treatment without this ad-hoc element would be superior. No clear connection is shown between this process and relativization.

7.2. The Rules for Forming Relative Clauses.

Assuming that the focus-emphatic clause is a type of relative clause, there are still a number of problems associated with the formal statement of the relativization process. Broadly speaking, they revolve around the impossibility of stating it as a unitary transformation, and the difficulty in deciding on the separate rules into which it should be split.²

In the first place, there is the question of the structural description which triggers its application. In previous treatments of relative clauses, the major condition usually involved some kind of identity between the head NP and an NP within the embedded S. But as we show in Chapter 6, Sections 6.2 and 6.7, there is a type of surface relative clause which has no head NP, which I call "variable" i.e. relative clauses which are paraphrases of indirect questions and a number of others, including the relative clauses which underly the clause in focus-emphatic S. Clearly the identity condition cannot be applied to these, since there is no head³. The distinctive property of such clauses is rather the presence of a certain type of non-specific NP containing ^{the} feature [+WH], which also underlies interrogative words and certain occurrences of koo-words.

2. I would not argue that all transformations should be broken down into elementary transformations. (see). Whether elementary transformations are separated or grouped together is an empirical matter to be determined for each rule of the grammar. Unfortunately in this case the best kind of evidence for the distinctness of the two rules i.e. that a third rule intervenes between them, is lacking.

3. Even with an it head as proposed by Chomsky (1970) there is no identity in the normal sense of the term.

Such elements are generated in the base in the case of IQ relative clauses, and generated by the transformation FOCUS-RAISING as replacements for the raised elements in the case of focus-emphatic clauses. As regards relative clauses with heads, in English too, [+WH] elements are commonly regarded as the source of relative pronouns, but the feature [+WH] is usually added by the transformation WH-ATTACHMENT to an NP in the clause on the basis of its identity with the head NP, before frontshifting takes place. Although this is somewhat ad hoc, since it appears to be based on little more than the morphological similarity of WH-elements, both in English and in Hausa, it does solve our problem. We can now say that there is a transformation WH-ATTACHMENT in Hausa which operates before RELATIVE FORMATION proper, adding [+WH] to the NP in the clause identical to the head. Following this RELATIVE FORMATION applies frontshifting [+WH] NPs, whether they are marked as such in the base, or created either by FOCUS-RAISING or WH-ATTACHMENT.

This brings us to the question of how many of the changes effected by relativization together with their conditions can be included in the frontshifting rule RELATIVE FORMATION. I have decided to include the change of Aux from [-REL] to [+REL] as part of this rule (even though it does raise certain technical problems) since the mentioning of Aux in the structural description makes it

4. In fact I think that the [+WH] feature is not entirely ad hoc and could be given a uniform semantic interpretation in terms of "variability". To examine this question, particularly how variability can be distinguished from non-specificity would go beyond the bounds of this thesis. Following this line might even imply dropping the identity condition in its present form and turning to an approach in which variables (wh-words) are present in the deep structure of restrictive relative clauses. The rule WH-ATTACHMENT represents a compromise between the two positions.

possible to state the modal restrictions on the embedded S directly⁵. But although I do use the terms "copying" and "chopping" to describe relative clauses in which the identical NP in the clause is pronominalized and deleted, respectively, it was not practical to represent this directly as two variants of RELATIVE FORMATION⁶. Instead, RELATIVE FORMATION is regarded as copying the [+WH] NP to the left under the node Comp: later a separate rule of RELATIVE DELETION applies to the original if its conditions are met, (see Section 13); otherwise PRONOMINALIZATION applies to the right-hand [+WH] NP.

It is also necessary to set up DA-INSERTION as a separate transformation, since there is a type of relative clause with a

5. The problems here arise from the difficulty in stating RELATIVE FORMATION for both top-S identical subjects preceding the AUX, on the one hand, and all other NP's following AUX on the other. A convention might be required such that two structural conditions which bear a certain relation to each other in the ordering of their elements could be collapsed, so as to avoid stating two rules (cf. Mirror-image rules, Langacker 1969b). Schachter avoids this problem by inserting rel in leftmost position.

6. The reason for this is to ensure the presence of the Pro object NP following yii in copying nominalizations and emphatic S in which the V is focus, so that it can be deleted after Comp node has been filled, because it is necessary to generate the quasi-dative particle wa/ma where the direct object is not focalized (see Chapter 1, Section 11). Of course, this analysis could be wrong, in which case case RELATIVE DELETION could be incorporated into RELATIVE FORMATION of two types, and RELATIVE FORMATION substituted for RELATIVE DELETION in the rule ordering in Section

koo-word as head in which da does not appear⁷. e.g.

- (1) koo nawa ka kaawoo zai ishee ni
however many you bring will be enough for me

The restriction on the occurrence of da cannot be stated as a condition on RELATIVE FORMATION, only as a condition on a separate DA-INSERTION rule, or as a rule of da-deletion applying after RELATIVE FORMATION has inserted da. The second type of operation viz. inserting an element only to delete it later is one best avoided unless it can be shown that another rule applies between insertion and deletion.

The absence of $\begin{pmatrix} \text{PRO} \\ [+WH] \end{pmatrix}$ - da in focus-emphatic sentences cannot however be considered a case of the blocking of DA-INSERTION, since the wh-pronoun is also omitted. This is treated here as resulting from the application of COMP-DELETION, since the relative marker is dominated by Comp (see Chapter 8, Section 2).

7.3. Restrictions on the Modal Properties of the Clause

The restrictions on the type of S which may be a relative or focus-emphatic clause described here apply only to the top S in the clause, and do not affect more deeply embedded S. It is probably

7. These may be headless relatives of the type described in Chapter 6 also. The surface head is clearly a [+WH] word which has not acquired a definite form with the referential suffix -n/-r as do other [+WH] elements when they undergo RELATIVE FORMATION. This could indicate that the deletion of the +WH determiner and the addition of -n/-r are part of DA-INSERTION. Duk - "all" + a clause of restrictive relative form is synonymous with this type of clause, having a wh-word-66er clause meaning.

In Kano, wacce replaces wadda as the feminine singular relative pronoun. This could be considered as resulting from the non-application of DA-INSERTION in this dialect in this case, as wacce is the form of the wh-determiner wace "which" used where no N follows. This suggests that wanda etc. are derived from wane-n-da etc. rather than wani-da etc. as proposed by Bagari.

significant that the change of AUX to [+REL] also applies only to the top S (with a certain class of exceptions explained in Sections 8 and 9). It is for this reason that it is possible to state the restrictions as requiring the presence of the top AUX in the structural description of RELATIVE FORMATION, with certain feature composition, since this top AUX [+REL] is already required for the statement of the change in tense system. It can be argued, however, on the basis of the point made in Section 7, that these restrictions are best stated as deep-structure constraints.

7.4. Subjunctive and Imperative

A subjunctive AUX in the top S of a relative or focus-emphatic clause is ungrammatical e.g. (2) and (3) respectively:

- (2) *kaa ga yaaron da ya zoo gidanmu?
did you see the boy who is to come to our house?
- (3) *yaaron nan (nee) ya zoo gidanmu?
it's that boy who is to come to our house

Even where sai + subj has a habitual rather than hortative meaning as in (4) and (5), or the subjunctive is negated with kada, as in (6) and (7), the sentences are ill-formed.

- (4) *kaa ga yaaron da sai ya zoo gidanmu?
did you see the boy who usually comes to our house?
- (5) *yaaron nan (nee) sai ya zoo gidanmu
it is that boy who usually comes to our house
- (6) *mootar da kada ka sayaa taa dadee
the car which you shouldn't buy is old
- (7) *mootar nan (nee) kada ka sayaa
it's that car which you shouldn't buy

An imperative is also impossible in this position:

- (8) *daakin da shaaree mana daa baa kazamii ba nee
the room which sweep for us wasn't filthy before
- (9) *daakin nan (nee) shaaree mana
it's this room sweep for us

Similarly, gaa, the Hausa equivalent of French voici/voilà, unlike the French words, cannot occur in relative or focus-emphatic sentences. This is because gaa is an anomalous imperative form of gani - to see⁸

- (10) *daakin da gaa (shi) nan daa baa kazami ba aee
the room which here (it) is wasn't filthy before
- (11) *daakin nan (nee) gaa (shi) nan
it is this room which here (it) is

The restrictions on the subjunctive and imperative can probably be collapsed. The 2nd person subjunctive as in (12) is synonymous with the imperative as in (9), and both are ungrammatical

- (12) *daakin nan (nee) ka shaarce mana

It is likely that the imperative can be derived from the 2nd person subjunctive (possibly by the transfer of the low tone of AUX on to the first syllable of the verb, and the deletion of the pronominal element). In this way one might be able to construct rules to predict the eccentric tone patterns of the imperative in the various verbal grades.

Where the subjunctive and imperative are ungrammatical, Future I may take their place, its normal meaning of a fairly definite prediction by the speaker of a future event is replaced by that of an unfulfilled state of affairs dependent on some person's wish or command, as in the relative clause in (13), which is approximately equivalent to the conjoined subjunctive S in (14) (where a subjunctive in the clause, as in (15) is ungrammatical).

8. It is anomalous because the normal pre-NP-object form of gani is ga and the pre-personal pronoun form is gan; for the imperative gaa is used in both cases.

- (13) su naa soo ka neemaa musu furar da zaa su shaa
they want you to find some fura for them that they will drink
(= are to drink)

- (14) su naa soo ka neemaa musu furaa su shaa
they want you to find some fura for them they(subj) drink

- (15) *su naa soo ka neemaa musu furar da su shaa
they want you to find some fura for them that they(subj) drink

Similarly the focus-emphatic imperative (9) is replaced by the grammatical (16).

- (16) *daakin nan (nee) zaa ka shaaree mana
it's that room you will sweep for us
(= sweep that room for us)

I would not like to suggest that there is any transformational link between the Future tense and the Subjunctive in Hausa of the kind suggested by Katz and Postal between the Future and Imperative in English (Katz and Postal 1964). However some kind of suppletion of the subjunctive by Future I appears to be at work here which manifests itself also in the prevalence of sentences like (17) (replacing (18)) in some dialects.

- (17) n naa soo zan yi cinikii
I want I will do trade

- (18) n naa soo n yi cinikii
I want I (subj) do trade

7.5. Copular Sentences

Another restriction shared by relative and cleft clauses is that copular sentences of the form (NP) - NP or Adj - Cop do not occur as their top S.

- (19) *ban yarda wadanda gajeeruu nee su shiga sooja ba
I don't agree to those who are short entering the army

- (20) *soojoojin nan nee gajeeruu nee
it is those soldiers who are the short ones

- (21) *yaarinyar da masooyinta dan sooja nee ta kan kwaana da kuukaa
a girl who her sweetheart is a soldier spends some nights crying

- (22) *yaarinyar nan, dan sooja nee masooyinta nee
that girl, it is a soldier who is her sweetheart.

Of course, Copular S may occur in lower S in such clauses e.g.

- (23) soojoojin nan (nee) muka cee gajeeruu nee
it is those soldiers who we said are short.

In order to render (19)-(22) grammatical, it is therefore necessary to insert a phrase like ya ke (or its variants ta ke, su ke etc.) at the left of the copular S, as in (24) and (25) with the meaning of (19) and (20). Although meaningless, this element constitutes a top S of a permitted kind i.e. containing AUX of the progressive tense⁹.

9. I would speculate that the invariant form ya ke S is derived from a deep structure like that of S-focus i.e. $S[NP[\Delta[S]] - \Delta - Cop] S$ by EXTRAPOSITION of S, where Cop takes on the AUX form ya ke since it is the first element in the VP. Incidentally, if this is correct, this is the only evidence to support the existence of an it-head for the subject structures at the pseudo-cleft level available in Hausa, as this would generate the ya prefix in ya ke by AUXAGREEMENT without problems. The forms ya/ta/su (and na etc.) ke agreeing with the head are probably derived by RAISING-TO-SUBJECT operating on the same structure. The same relationships link the following sentences:

- (A) Kande taa zoo yaa kasancee
Kande came happened
- EXTRAPOSITION
⇒ (B) yaa kasancee Kande taa zoo
(it) happened Kande came
- RAISING
(A) ⇒ (C) Kande taa kasancee taa zoo
Kande happened she came

COP DELETION also occurs in the embedded S both with this type of verb and in ya ke S. It is interesting to note that AUX-PRO DELETION does not apply in such sentences. For instance (24) could not be replaced by (D)

- (D) *ban yarda wa⁶anda ke gajeeruu (nee) su shiga sooja ba

This seems to provide evidence that, unlike in normal relative clauses (see Section 14), the subject NP of the top S is not present at the time of AUX PRO DELETION. One could argue from this either that RAISING operates on the structure formed by prior application of EXTRAPOSITION, and that AUX PRO DELETION intervenes between EXTRAPOSITION and RAISING, or that RAISING operates on the structure with S still in the subject, raising the identical NP which has already been changed into a pronoun by PRO-NOMINALIZATION into subject position, after which the subject is deleted by PRO-SUBJECT DELETION on the last cycle before AUX-PRO DELETION can finally apply. Further work is needed on this question. For the rule-ordering employed here see this Chapter, Section 14.

- (24) ban yarda wa/anda $\left\{ \begin{array}{l} \text{ya ke} \\ \text{su ke} \end{array} \right\}$ gajeeruu (nee) su shiga sooja ba
 (25) yaariyyar nan dan sooja nee ya ke masooyinta (nee)

The emphasis of a focus predicate NP or Adjective in a copular S is carried out not by the usual process in verbal sentences, but by switching the positions of the VP $\left(\left\{ \begin{array}{l} \text{NP} \\ \text{Adj} \end{array} \right\} \text{ Cop} \right)$ and the subject NP. Thus from (26), (27) is derived by PREDICATE EMPHASIS, and from (28), (29).

- (26) soojoojii gajeeruu nee
the soldiers are short
 (27) gajeeruu nee soojoojii
the soldiers are short
 (28) gajeeruu soojoojii nee
the short ones are soldiers
 (29) soojoojii nee gajeeruu
it is the soldiers who are the short ones.

Neither this type of S which has undergone PREDICATE EMPHASIS nor focus-emphatic verbal S is any more acceptable than other copular S as the top S of a focus-emphatic clause, e.g. (30) and (31). For most speakers the same is true of relative clauses, but some do not find focus-emphatic S ungrammatical in relative clauses, e.g. (32) and (33)

- (30) * a kasarmu nee soojoojii nee gajeeruu
it is in our country that it is the soldiers who are the short ones
 (31) * a kasarmi nee soojoojii nee su kee milkii
it is in our country that it is the soldiers who are ruling
 (32) (*)ban ta'a tafiya'a kasar da soojoojii nee gajeeruu ba
I've never been to a country where it is the soldiers are the short ones.
 (33) (*)ban ta'a tafiya'a kasar da soojoojii nee su kee milkii ba
I've never been to a country where it is the soldiers who are ruling

As far as these restrictions on copular S are concerned, focus-fronting would probably offer the following explanation: focus-fronting applies only once in a sentence, and where it does

apply, the constituent moved to the left takes the copula along with it; this covers both verbal and copular S. This rule naturally generates grammatical versions of (21) and (22) without the final nee, since this has been moved into post-initial position. If the same fronting process takes place in relative clauses, Cop moves to the left with the +WH NP and is somehow deleted. The fact that negative sentences of the copular type but without an overt Cop like (34) occur, but not with Cop (35) may be construed as evidence for this.

- (34) Hausaawan da baa musulmi ba sai 'yan kaɗan a kee saamuq
Hausas who are not muslims, only a few are found
- (35) *Hausaawan da baa musulmi ba nee, sai 'yan kaɗan a kee saamuq

As far as the examples involving focus-emphasis within a focus-emphatic or relative clause are concerned ((30)-(33)), these are ruled out since fronting has applied twice in them. The dialect in which a second application of fronting is permitted in relative clauses might be interpreted as exhibiting a divergence between focus- and wh- fronting not present in other dialects.

Focus fronting also provides a simple explanation of the data about S-focus along similar lines (see Section 7). Such a fronting rule must be formulated in such a way that Cop in lower S is not moved along with the fronted constituent, only Cop in the top S. For focus fronting, the other restrictions on the modal properties of clauses must still be handled by a separate constraint whereas under the focus-raising approach they can be stated together. The ungrammaticality of copular S would be guaranteed by the presence of AUX, which does not occur in copular S. This does not however predict the grammaticality of (34), where there is no AUX, and requires that

baabu - "there is not" and (for some dialects)¹⁰ akwai - "there is",
be classed as AUX since they are grammatical in relative and focus-
emphatic clauses like (36) and (37).

- (36) garin da {baabu
akwai} riijiyaa zan tafi
it's to the town in which there {is not
is} a well that I shall go
- (37) garin nan (nee) {baabu
akwai} riijiyaa
it's in that town that there {is not
is} a well

7.6. The Relative Perfect.

The formulation of the change in AUX from [-REL] to [+REL] implies that a general, not relative tense, always underlies the surface relative tense in relative and focus-emphatic clauses. Since there is only one relative tense generated in the base (the Relative Perfect tense used in narrative sentences, i.e. Parson's "Aorist"), and the distinction between this and the General Perfect is neutralised in surface structure, it is difficult to prove that the deep form is always [-REL]. However, the Relative Perfect is invariably used in the main clause in sentences like da + clause,

10. It has been reported to me that for some speakers akwai, like the copula, requires a ya ke-type top S to make it grammatical in such clauses, although baabu/baa is grammatical alone. I did not encounter this dialect myself. The other positive existential element da does not appear in the top S of relative clauses, e.g. (E), but since it does occur in focus-emphatic S, this might be the effect of the sequence da da

- (E) * garin da da riijiyaa zan tafi
it's to the town in which there is a well that I shall go

sai + clause, "when x, then y" where this is a narration of a sequence of past events. Such sentences are ungrammatical as relative or focus-emphatic clauses, e.g.

(38) *baraawon da da muka zoo nan sai muka kaamaa (shi) yanaa daure
the thief who when we came here then we caught (him) is in custody

(39) *baraawon nan (nee) da muka zoo nan sai muka kaamaa (shi)
it was that thief who when we came here then we caught him

Such sentences may be ruled out by semantic constraints on the occurrence of narrative, rather than specifically syntactic considerations.

7.7. Restrictions on Sentence Focus

In the examination of the relations between relative and focus-emphatic clauses, it should be borne in mind that the restrictions described in the preceding section also apply to the S in the sentence-focus structure S nee¹¹. e.g.:

- | | |
|-----------------------|--|
| Subjunctive | (40) *yaaroo ya zoo gidanmu nee
it is that the boy should come to our house |
| Imperative | (41) *shaaree mana daakii nee
it is that sweep the room for us |
| Normal Copular | (42) *soojoojii gajeeruu nee nee
it is that the soldiers are short |
| Inverted Copular | (43) *gajeeruu nee soojoojii nee
it is that the soldiers are <u>short</u> |
| Verbal Focus-Emphatic | (44) *soojoojii nee su ke mulkii nee
it is that it is the soldiers who are ruling |
| Relative Perfect | (45) *muka kaamaa baraawoo nee
it is that we caught a thief |

Since the above S cannot have undergone frontshifting by RELATIVE FORMATION, it would appear that we must look elsewhere than to the

11. In Schachter's analysis, such sentences are not analysed as S nee. They are simple, not complex, the Cop being generated by the base thought of VP (in his original formulation).

conditions of this rule for the explanation of this phenomenon. For further discussion, see Chapter 8, Section. X

7.7. "Catenative" Constructions

As mentioned earlier, there is a certain class of exceptions to our generalization that AUX becomes [+REL] only in the top S of the relative and focus-emphatic clauses. These are those clauses in which there is a verb or verbal phrase of the type described by Parsons as "Catenative" in the top S, dominating another S. In such circumstances the AUX in the lower VP also becomes [+REL]. Parsons defines this class of verb as requiring a certain type of agreement in the following tense, not found with other verbs, one of the rules of which is that the following tense should be [-REL] if its tense is [-REL], and [+REL] if its tense is [+REL]. Given this, an ad-hoc solution would be to add a rule whereby certain features of AUX are copied on to the lower AUX if the verb is +CAT ¹².

But on further consideration, it seems that the verb class "Catenative" is far from easily definable. There are at least two types of construction in which such tense-sequences operate ¹³. The first is very similar to the "serial" construction familiar in other West African languages. Two or more VP's follow each other without intervening elements, the subject NP of the first VP being that of

12. Since many of the items which supposedly belong to this class are Verb + NP phrases, the assignment of features becomes more complicated. A more serious problem is the difficulty of drawing the line between what should be marked [+CAT] and what should not, e.g. in "serial" constructions a huge number of combinations of two or more actions could qualify for this designation.

13. Verbs like rigaa - "to have already (done something)" is clearly subject to the same tense and other restrictions but do not fit into either of the categories described here.

the succeeding VP's, but it only occurs preceding the initial VP, as in (46). The object NP of the succeeding VP's is often identical to that of the initial VP, and if this is the case, it too is omitted, as in (47). Unlike other languages with serial constructions, Hausa does not omit the second and subsequent AUX constituents.

- (46) Muusa yaa yi wuf yaa kaamaa shi
Musa has/had done quick movement he has/had caught him

- (47) Muusa yaa dauki sandaa yaa jeefar
Musa has/had picked up a stick and has/had thrown

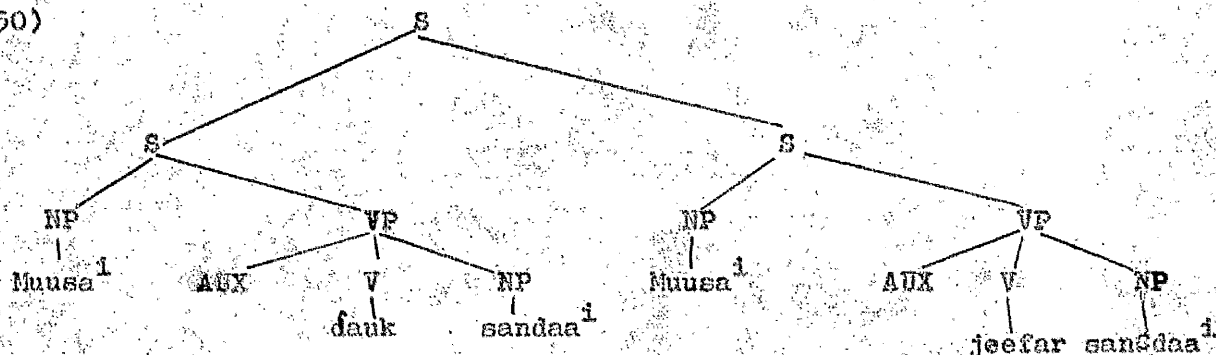
Where the sentence (46) is within a relative or focus-emphatic clause, as in (48) and (49) respectively, both the AUX constituents become [+ REL].

- (48) wanda Muusa ya yi wuf $\left\{ \begin{smallmatrix} *yaa \\ ya \end{smallmatrix} \right\}$ kaamaa wani. δ an taawaayee nee
the one Musa has done quick movement and caught was a rebel

- (49) shi (nee) Muusa ya yi wuf $\left\{ \begin{smallmatrix} *yaa \\ ya \end{smallmatrix} \right\}$ kaamaa
it was him that M. has done quick movement and caught

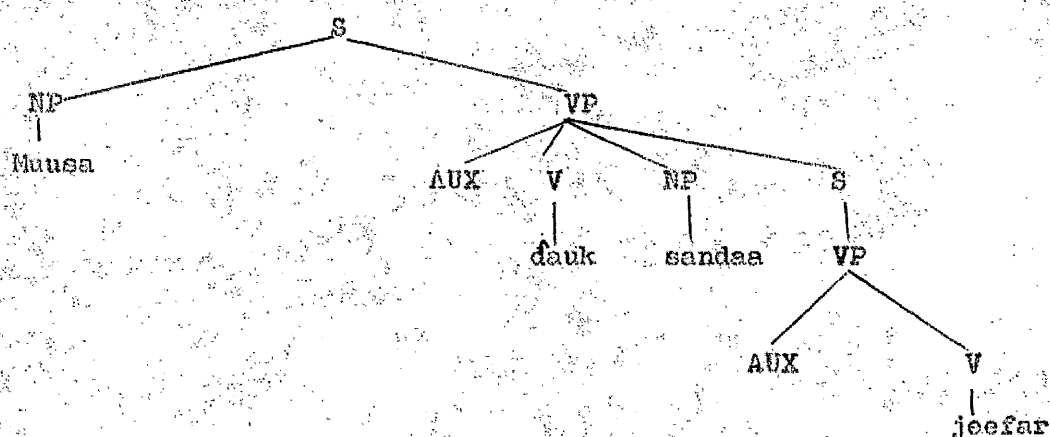
Serial constructions break down a process which is considered in some sense a unity into two or more components, whether they are sequential or simultaneous. In this they differ from narrative sequences of VP's which are regarded more as separate events, and the difference is reflected in the different behaviour of the tenses. Both however, could be regarded as types of conjoined sentences. In the case of serial S, one could say that some form of CONJUNCTION REDUCTION applies, embedding the second S as a daughter of the first VP, and deleting elements which are identical to elements in the left hand S, thus deriving (51), the surface structure of (47) from (50).

(50)



CONJUNCTION REDUCTION

(51)



This CONJUNCTION REDUCTION rule would then be the Hausa counterpart of the rule which, in English, reduces conjoined S that share structure, but which is not part of Hausa grammar, as the ungrammatical S (52) shows.

- (52) *Musa yaa daukaa yaa jeefar da sandaa
 Musa picked up (and) threw a stick

There would be some difficulty in this approach, since there does appear to be a difference in meaning between the simple conjoined S and the serial S, as indicated above. Also the serial meaning seems to depend less on the presence of a particular features.

say [+CAT], on the first verb or object NP, although some are more commonly used than others, than on the interpretation of the relation between the two VP's. The alternative may be, then, to generate S dominated by VP in the base, as the structure for serial conjunction.

A second type of "catenative" construction involves verbs in the higher S which can either take subjunctive complement objects, or embedded S in which AUX follows the "catenative" tense-agreement system. A major category of these is verbs of causation, such as saa - "cause", (which I shall use for exemplification) although other types such as verbs of commanding like cee - "say", "tell" behave in a similar way in some dialects.

In the case of saa, the subject of the embedded sentence is not identical to the subject of the matrix S, although it must be identical to the non-sentential object of saa if there is an object present¹⁴. The meaning of the sentence with the subjunctive complement and the "catenative" embedding differ in the following way: in the former example (53), the speaker is asserting that an instance of causation took place, but not committing himself about the results of the causation, whereas in the latter, e.g. (54), the speaker is asserting both that the causation and the event caused took place (will take place etc. in other cases).

(53) son kai yaa saa 'yan' uwaa su yi fa^haa
selfishness caused the brothers to quarrel

(54) son kai yaa saa 'yan' uwaa sun yi fa^haa
selfishness caused the brothers to quarrel (and they
actually quarrelled).

14. This identity may come about through the operation of a transformation RAISING-TO-OBJECT on the embedded subject.

The distinction may not be absolutely clear here, since the English gloss always implies the (54) interpretation. The negative (55) and (56) may throw more light on the question. In the S with the subjunctive complement (55), the scope of negation covers the embedded S as well as the matrix so that the sentence is ambiguous as to whether they did quarrel or not, whereas in the "catenative", the negative scope does not include the embedded S, so that it is unambiguously asserted that the brothers quarrelled.

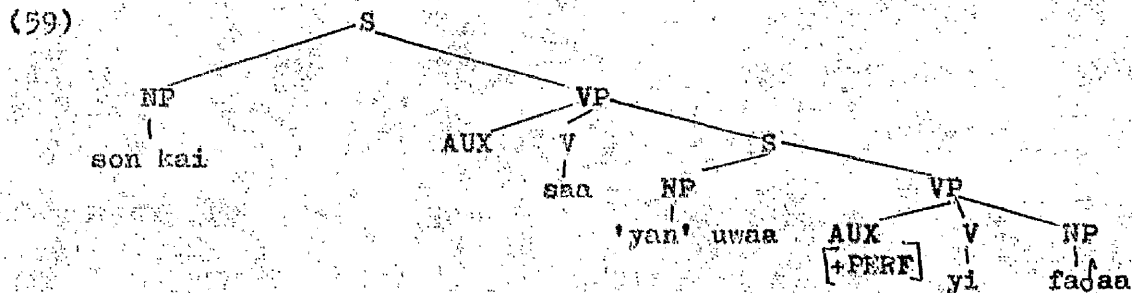
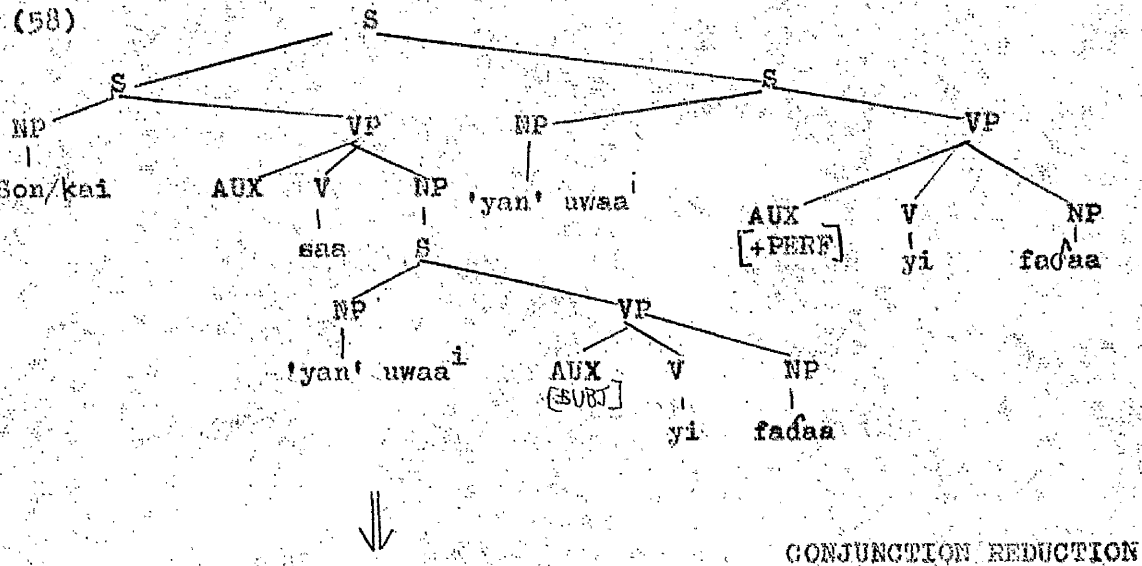
- (55) son kai bai saa 'yan' uuaa su yi fa'aa ba
selfishness did not cause the brothers to quarrel
- (56) son kai bai saa 'yan' uuaa sun yi fa'aa ba
selfishness did not cause the brothers to quarrel (but they
did quarrel)

Now the normal rule for embedded S is that they do not fall within the scope of the higher performative¹⁵, and that they do fall within the scope of a higher negative. This is so for the subjunctive complement here, but for the "catenative" S, the situation is reversed. This seems good prima facie evidence that the "catenative" sentences are embedded at surface structure, but are derived from deep-structure conjoined S by CONJUNCTION REDUCTION. A likely candidate for the deep structure of (54) is (58) which would have a surface form (57), which accurately reflects the meaning of (54). The performative would affect both S equally, whereas neg if attached to one S, could not affect the other. As well as CONJUNCTION REDUCTION, another rule, for which I have no independent motivation, must

15. This seems to me to be the clearest way of stating which parts of the sentence the speaker is asserting as fact. Whether this "performative" predicate is present at a deep level in the syntactic component, or supplied by the semantic interpretation is left an open question.

apply deleting the subjunctive complement to produce (59)

- (57) son kai yaa saa 'yan' uwaa su yi fa^haa, sun yi fa^haa
 selfishness caused the brothers to quarrel (and) they quarrelled



These "catenatives" exhibit [+REL] AUX constituents in relative and focus-emphatic clauses too, e.g.

- (60) 'yan' uwan da son kai ya saa {^{*sun} suka} yi fa^haa ba su kyau^htaa ba
 the brothers whom selfishness caused to quarrel did not act
 rightly

- (61) 'yan' uwan^hu (nee) son kai ya saa {^{*sun} suka} yi fa^haa
 it was our brothers whom selfishness caused to quarrel

7.9.

"Catenative" Structure and the Conditions on the Relative
AUX Change

Now according to the above sketch of the derivation of two types of "catenatives", what they, and presumably other "catenatives" share is the embedding of the right-hand S directly under VP.

This structure can be justified in the following way:

(a) The embedded sentence cannot be an S embedded under NP, since if it were, it could ^{also come} be the focus in focus-emphatic sentences, which it cannot. Thus a complement S, dominated by NP, can be the focus as in (62), but neither a serial "catenative" as in (63), nor a causative "catenative" as in (64) may.

(62) su koowaa Zaariya (nee) muka saa
it was that they (subj) move to Zaria that we caused.

(63) * $\begin{Bmatrix} \text{suka} \\ \text{sun} \end{Bmatrix}$ taashi (nee) suka yi shirii
it is they have left that they made preparations

(64) *sun koowa Zaariya (nee) muka saa
it was that they moved to Zaria that we caused.

(b) That the S is a VP-daughter, not an S-daughter can be shown by its behaviour with regard to RIGHT SHUFFLE. As I suggested in Chapter 4, Section 6, this transformation applies only to S-daughters. So while an extraposed complement, as in (65), may be shifted to the right of the final negative marker ba, the "catenative" embedded S, as in (66) and (67) may not. The obvious explanation for this is that such S are not S-daughters, so they must be VP-daughters.

(65) sarkii bai ji laabaarii ba tukuna ceewaa talakasawa sun ki
biyan haraajii
the king has not heard the news (neg) yet that the peasants
have refused to pay taxes.

- (66) *sarkii bai kaaree ba yaa taashii
the king did not end up (neg) he left¹⁶
- (67) *sarkii bai saa ba an yi bikin auree
the king did not cause (neg) one held a wedding feast

On this basis, it is possible to re-state the conditions under which AUX becomes [+REL] so as to include both top S and lower "catenative" embedded S:

- (a) the AUX involved is dominated by the highest VP
- (b) the branch connecting the AUX with the highest VP passes through no NP node¹⁷.

7.9. Relative Anaphora

The conditions on the anaphoric processes which the NP identical to the relative head or focus undergo are presented here as conditions on the transformation RELATIVE DELETION, in accordance with the formulation of relativization in Section 2 of this Chapter.

16. This sentence has the meaning "the king had not finished when he left" i.e. not a catenative meaning, which in the case of kaaree is "to end up by (doing something)".

17. As an alternative, one could maintain that tense-change applies only to the top S and add a rule to the grammar which allows features to filter down into S within VP not dominated by NP. This would be preferable if any other features but [+REL] were crucially involved, but I am not convinced of this. Incidentally, a top S with a perfect AUX and saa may be followed by an S with a progressive AUX. In the relative contexts under discussion, naa becomes [+REL] kee/ke, too e.g.

- (F) gidan da muka saa $\left\{ \begin{array}{l} *a \text{ naa} \\ a \text{ kee} \end{array} \right\}$ ginaawaa ya naa da beene uku
the house which we caused one is building has three storeys

Although constituents other than NP may be moved in focus-emphatic S, only NP's (and possibly PP's) may be fronted in relative clauses since the head on which the identity condition is defined is always an NP¹⁸.

18. One problem arises from the derivation of qualified nominals, including relative clauses, adjectives, genitives and agentives from the structure [NP [S_i]]. Given such a structure, one might expect to find that the left NPⁱ could delete or pronominalize the right NPⁱ in a structure like (G), leaving the qualifying elements derived from S₂ intact.

(G) [NPⁱ S₁ [X NP [NPⁱ [S₂] NP] S₁]]

Indeed, sentences do occur in Hausa in which such a process might be thought to have applied e.g.

(H) 'yan sandan da aka taaraa {doogwaayee
na Kano
maasu bindigaa} zaa su tsaree bankii

the policemen that one gathered {tall
of Kano
with guns} will protect the bank

(I) 'yan sandaa (nee aka taaraa {doogwaayee
na Kano
maasu bindigaa})

it was the policemen that one gathered {tall
of Kano
with guns}

In fact, these are not cases of deletion of head NP's without their qualifiers: in (H) two relative clauses are attached to the head, and in (I) RELATIVE CLAUSE EXTRAPOSITION has applied. Where the NP is an indirect object, the ungrammaticality of such a process is quite clear.

(J) **'yan sandan da aka kaaraa wa {doogwaayee
na Kano
maasu bindigaa} aikii sun faara kuka

the policemen whom one has increased for {tall
of Kano
with guns} work have begun complaining

(K) **'yan sandaa (nee) aka kaaraa wa {doogwaayee
na Kano
maasu bindigaa} aikii

it was the policemen whom one has increased for {tall
of Kano
with guns} work

In order to rule out such occurrences of NP-identity, either the [NP[S]] analysis has to be changed, or the rule limited to operate on NP's in the embedded S which have no right sisters. The former suggestion may take the form of a transformation which absorbs the S structure into the head NP when RELATIVE FORMATION has applied.

(see Section 13), or conjoined NP's¹⁹, in which an NP may be pronominalized (see Section 11).

Apart from this clearly ungrammatical case, there appears to be a hierarchy of acceptability in relative and focus-emphatic clauses for the pronominalization of identical NP's. Among the least acceptable are those in which the NP occurs embedded in a relative clause inside the relative or focus-emphatic clause, particularly where the lower relative clause is the subject of the sentence, as in (72)-(73), or the identical NP is a subject as in (74) and (75), and the situation is even worse if both these conditions are met (76) and (77). Unlike their English equivalents, however, none of these can be said to be fully ungrammatical.

(72) ? zaa su sallami akaawunⁱ da mutaanen da suka baa shiⁱ aikin suka
they will dismiss the clerkⁱ who the men who gave himⁱ the job have
haukacee
gone mad

(73) ? akaawun nanⁱ nee mutaanen da suka baa shiⁱ aikin suka haukacee
it was that clerkⁱ who the men who gave himⁱ the job went mad

(74) ? zaa su sallami akaawunⁱ da suka zargi mutaanen da baa yaaⁱ soo
theyⁱ will dismiss the clerkⁱ who theyⁱ blamed the men whom heⁱ
doesn't like

(75) ? akaawun nanⁱ nee suka zargi mutaanen da baa yaaⁱ soo aikin
it was that clerkⁱ who they blamed the men heⁱ doesn't like

(76) ?? zaa su sallami akaawunⁱ da mutaanen da baa yaaⁱ soo suka Gaataa
masa rai
they will dismiss the clerkⁱ who the men whom heⁱ doesn't like
have disappointed himⁱ

(77) ?? akaawun nan (nee) mutaanen da baa yaaⁱ soo suka Gaataa masa rai
it was that clerkⁱ who the men whom heⁱ doesn't like have
disappointed himⁱ

19. Extraction from conjoined NP's is odd, too, but a more acceptable reading is usually possible in which da has an associative meaning e.g.

(L) wandaⁱ muka zargi Audu da shiiⁱ an san shi da waayoo
the oneⁱ we blamed Audu { ? and } himⁱ is known for his
together with } cunning

7. 10 Cases in which RELATIVE DELETION Does Not Apply

RELATIVE DELETION does not apply to NP's within relative and focus-emphatic clauses in the following cases. Instead PRONOMINALIZATION always applies to the right-hand coreferential NP.

(a) NP's with heads. There are some apparent exceptions to this rule e.g. "headless" relatives belong to this category even though we argue that they have no head in deep structure, (see and Chapter 6 Section 6.). Nominalizations on the other hand under certain circumstances allow deletion of an NP within them although the verbal-noun has the characteristics of a head in surface structure (see Section 13). NP's with heads which resist deletion may be classified in the following way:

(i) Relative Clauses. Pronominalization is definitely grammatical despite the oddness of some types of example as illustrated above. Pronominalization in "headless" (i.e. IQ) relative clauses is more acceptable (see Chapter 6, Section 6). Non-IQ relatives which are apparently headless in surface structure (beginning with wanda, inda, etc.) also resist deletion since they have pronominal heads in deep structure.

(78) akaawun nanⁱ nee suka dauki wanda baa saa $\left\{ \begin{matrix} *soo \\ son\ sa^i \end{matrix} \right\}$

it was that clerkⁱ who they hired the ones that didn't like $\left\{ \begin{matrix} * \emptyset \\ him^i \end{matrix} \right\}$

(ii) Complements with heads e.g. (79)-(80) (indicative), (81)-(82) (subjunctive).

(79) tsoofon da a kee baa ni laabarin an binnee $\left\{ \begin{matrix} * \emptyset \\ shi \end{matrix} \right\}$ ai laafiyarsa $\left\{ \begin{matrix} * \emptyset \\ him \end{matrix} \right\}$ kalau
the old man that one is telling me the story that one buried
is quite healthy

- (80) tsoofon nan (nee) a kee baa ni laabarin an binnee $\left\{ \begin{smallmatrix} * \emptyset \\ \text{shi} \end{smallmatrix} \right\}$
 the old man that one is telling me the story, that one buried $\left\{ \begin{smallmatrix} * \emptyset \\ \text{him} \end{smallmatrix} \right\}$
- (81) sai ka fid da kuoin da ka ki umurnin ka kaawoo $\left\{ \begin{smallmatrix} * \emptyset \\ \text{su} \end{smallmatrix} \right\}$
 you must bring out the money which you refused the order to bring $\left\{ \begin{smallmatrix} * \emptyset \\ \text{it} \end{smallmatrix} \right\}$
- (82) kuoinaa (nee) ka ki umurnin ka kaawoo $\left\{ \begin{smallmatrix} * \emptyset \\ \text{su} \end{smallmatrix} \right\}$
 you
 it was my money which [refused the order to bring $\left\{ \begin{smallmatrix} * \emptyset \\ \text{it} \end{smallmatrix} \right\}$

(iii) Complex NP's, containing other NP's derived in the present analysis from relative NP's of various types, i.e. genitive (83)-(84) and agentive (85)-(86) and possessive (87)-(88). For the latter, clauses beginning with mai with no surface head behave in the same way, since they have pronominal heads in deep structure.

- (83) makaaфон da ka kee son $\left\{ \begin{smallmatrix} * \text{karee} \\ \text{karensa} \end{smallmatrix} \right\}$ yaa tafi kaasuwa
 the blind man who you like $\left\{ \begin{smallmatrix} * \text{dog} \\ \text{his dog} \end{smallmatrix} \right\}$ (= whose dog you like) has
 gone to market.
- (84) makaaфон nan (nee) ka kee son $\left\{ \begin{smallmatrix} * \text{karee} \\ \text{karensa} \end{smallmatrix} \right\}$
 it's that blind man who you like $\left\{ \begin{smallmatrix} * \text{dog} \\ \text{his dog} \end{smallmatrix} \right\}$ (=whose dog you like)
- (85) mootar da a kee neeman (yaaroo) $\left\{ \begin{smallmatrix} * \text{mai gyaaraawaa} \\ \text{mai gyaaraa ta} \end{smallmatrix} \right\}$ tanaa geeften
 hanyaa
 the car which one is looking for (a youth) $\left\{ \begin{smallmatrix} * \text{who repairs} \\ \text{who repairs it} \end{smallmatrix} \right\}$ is beside
 the road
- (86) mootar Iisa (cee) a kee neeman (yaaroo) $\left\{ \begin{smallmatrix} * \text{mai gyaaraawaa} \\ \text{mai gyaaraa ta} \end{smallmatrix} \right\}$
 it's Isa's car which one is looking for (a youth) $\left\{ \begin{smallmatrix} * \text{who repairs} \\ \text{who repairs it} \end{smallmatrix} \right\}$
- (87) mootar da a kee neeman (yaaroo) $\left\{ \begin{smallmatrix} * \text{mai} \\ \text{mai ita} \end{smallmatrix} \right\}$ tanaa geeften hanyaa
 the car which one is looking for (a youth) $\left\{ \begin{smallmatrix} * \text{with} \\ \text{with it} \end{smallmatrix} \right\}$ is beside the road

- (88) motar lisaa (cee) a kee neeman (yaaroo) $\left\{ \begin{array}{l} *mai \\ mai ita \end{array} \right\}$
 it's Isa's car which one is looking for (a youth) $\left\{ \begin{array}{l} *with \\ with it \end{array} \right\}$

Neither pronominalization nor deletion of an NP contained in a complex NP is possible where the genitive link occurs in a complex NP which is a set idiom, name or title, e.g. (89)-(91). This restriction should be guaranteed by the occurrence of such phrases as single lexical items, thus preventing transformations applying to parts of them.

- (89) * banzar da su kee yin zamanta sai wahalaa zaa ta jaawoo a baayaa
 the worthlessness they are leading a life of it will only bring
 trouble later.
- (90) * banzaa (cee) su kee yin zamanta
 it's worthlessness they are leading a life of it (sc. zaman banzaa -
 worthless, idling.
 lit. living of worthlessness)
- (91) * Katsina (cee) na kee sha'aawar littaa'in Waalinta
 it's Katsina that I enjoy reading the book of the Wali of her

There is a further category of NP's which may be deleted even though they appear both within PP and governed by a head NP. This "head" is a certain type of locative noun, e.g. ciki - inside, Rar-Rashi - underneath.

(b) NP's without heads not in object position. NP's without heads normally allow deletion (see next Section), but other NP's within NP's with other functions normally do not. This is illustrated here for subjects; oblique NP's within PP's also conform to this, but this may be due to the requirement that PP's either undergo Pied-Piping and deletion, or the NP is pronominalized.

- (i) Headless complements, e.g. ceewaa etc. in (92) and (93):

(92) mootar nan wadda ceewaa kaa $\left\{ \begin{array}{l} *sayaa \\ sayee\ ta \end{array} \right\} \left\{ \begin{array}{l} ta^{20} \\ ya \end{array} \right\}$ baa ni maamaakii taa
laalaacee

that car which that you have {bought
bought it} surprised me has broken down.

(93) mootar nan (cee) ceewaa kaa $\left\{ \begin{array}{l} \text{*sayaa} \\ \text{sayee ta} \end{array} \right\} \left\{ \begin{array}{l} \text{ta} \\ \text{ya} \end{array} \right\}$ ba ni maamakii

it is that car which that you } bought } surprised me
 bought it }

(ii) Nominalizations. The conditions on deletion in nominalizations are the same as those of headless complements (see Section 13). In the present view, this is because nominalizations are derived from a headless complement structure.

(95) mootar nan wadda { *gyaaraawaa } ta kee baa ni wuyaa taa laalaascee
gyaaraa ta

that car which { "repairing
repairing it } is giving me trouble has broken down

(95) mootar nan (cee) { *gyaarawaa
gyaaraa ta } ta kee baa ni wuyaa

it is that car which { *repairing
repairing it } is giving me trouble.

(C) NP's within simple PP's. (for details see Section 12(B)).

7.11. Non-application of RELATIVE DELETION Resulting from the Prior Application of PRONOMINALIZATION.

There are also cases of pronominalization of identical NP's within relative and focus-emphatic clauses which do not originate directly from the position of the NP's, but rather from the fact that another identical NP occurs between the head and the NP with which we are concerned.

In (96) and the parallel focus-emphatic S (97), the pronoun ~~the~~

20. ceewaa complements control either masculine or feminine agreements in AUX in the Kano dialect, even where ceewaa is deleted (see Galadanci 1969 p. 10). There is a good case for saying therefore that CEEWAA-DELETION, (which is one rule in the complex we are calling COMP-DELETION), follows AUX AGREEMENT. The ambivalence probably results from the oscillation of ceewaa between being an NP (the nominalized form of cee - to say) and simply a complementizer.

is obligatory in the clause, even though it is in a position (object in a headless complement), to which RELATIVE DELETION may apply in normal circumstances, as (98), in which deletion is optional, shows.

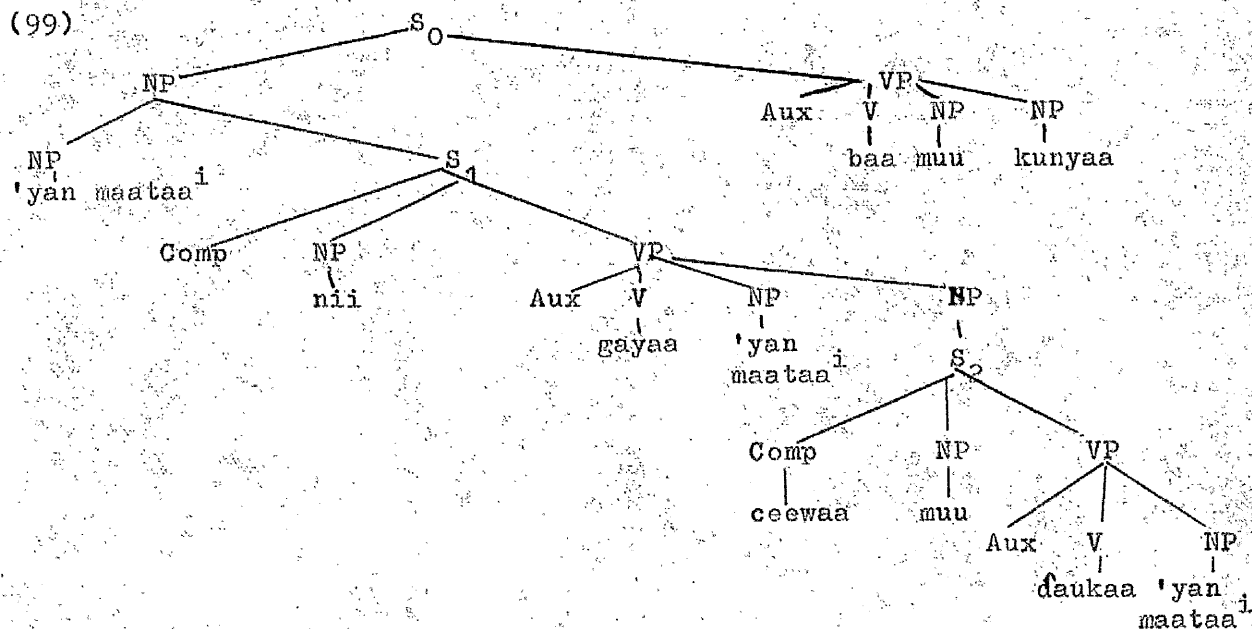
(96) 'yan maatan da na gayaa wa zaa mu { *ɗaukaa
ɗaukee su } sun baa mu kunyaa
the girls whom I told we would { *pick up²¹
pick them up } have embarrassed us

(97) 'yan maataa (nee) na gayaa wa zaa mu { *ɗaukaa
ɗaukee su }
it was girls I told we would { *pick up
pick them up }

(98) 'yan maatan da na gayaa maka zaa mu { ɗaukaa
ɗaukee su } sun baa mu kunyaa
the girls whom I told you we would { pick up
pick them up } have embarrassed us

The difference between (96) and (98) is that in (96) there is an NP coreferential to the relative head 'yan maataa following gayaa wa, in deep structure which has been deleted in surface structure, whereas in (98) there is no such coreferential NP. These facts can be explained in terms of the cyclic nature of PRONOMINALIZATION, established in Chapter 4. The phrase-marker (99) is approximately the deep structured (96).

21. In my dialect of English, unlike in Hausa, the relative head may delete more than one identical NP within the clause.



Now on the S_1 cycle, PRONOMINALIZATION applies, changing the 'yan maataa in S_2 into the pronoun suu since it is coreferential to 'yan maataa in S_1 . After this, on the S_0 cycle, RELATIVE DELETION applies after RELATIVE FORMATION deleting 'yan maataa in S_1 by identity with the head in S_0 . We can now say that RELATIVE DELETION does not apply to the pronoun in S_2 either because they are no longer identical, or that RELATIVE DELETION erases only one NP on each application and this must be the nearest identical NP. I believe the latter is probably the correct generalization.²²

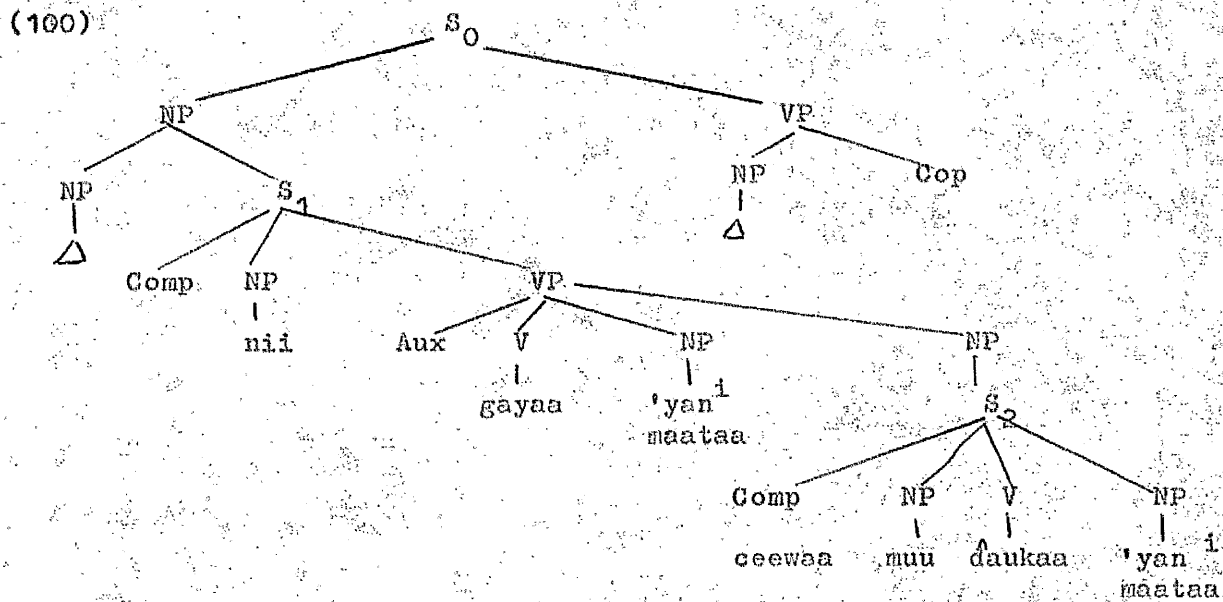
The same explanation works for focus-emphatic S too.

(100) is the deep-structure of (97), using the focus-raising approach.

22. I do not know of any case of simultaneous deletion of more than one NP in Hausa; apparent cases in conjoined relatives as in (M) are probably to be related to deletion in non-embedded "catenative" S as in (N)

(M) keeken da na gyaaraa na shaafaa wa fentii...
the bicycle which I repaired and painted...

(N) naa gyaara keeke naa shaafaa wa fentii
I-repaired the bicycle and painted (sc. it)



The 'yan maataa in S_1 pronominalizes the 'yan maataa in S_2 on the S_1 cycle, then on the S_0 cycle FOCUS-RAISING moves the 'yan maataa in S_1 into S_0 and RELATIVE FORMATION and RELATIVE DELETION apply, on the basis of the [+WH] pronoun remaining.

The same ordering can be observed where PRONOMINALIZATION, not RELATIVE DELETION applies on the higher cycle. Thus in (101), both -sa and shi are coreferential to Audu, but where the identical NP in the clause is deleted, -sa cannot be coreferential, as in (102), Chapter 5, Section 6.

(101) Auduⁱ (nee) wansaⁱ ya dookee shiⁱ
 it was A.ⁱ, who hisⁱ brother beat himⁱ
 (i.e. whose)

(102) *Auduⁱ (nee) wansaⁱ ya dookaa
 it was A.ⁱ who hisⁱ brother beat

Here again PRONOMINALIZATION applies within the clause to produce shi, and on the whole S to produce -sa in the clause on the pseudo-cleft structure.

There is no clear line between where RELATIVE DELETION is optional and where obligatory. Since this is not intended to be a full study of the question, I shall simply list some of the factors involved, then go on to describe a few of the more interesting cases of RELATIVE DELETION.

(a) Deletion can be said to be virtually obligatory in the case of direct objects in the top S, as in (103) and (104) and preferred with indirect objects in the top S, (105) and (106).

(103) naaman da muka cii (? shi) yanaa da taurii
the meat we ate (? it) was tough

(104) naamaa (nee) muka cii (?shi)
it was meat we ate (? it)

(105) nii da suka yi $\begin{Bmatrix} \text{wa} \\ \text{mini} \end{Bmatrix}$ bikii baa wani babba ba nee
I who they held $\begin{Bmatrix} \text{for} \\ \text{for me} \end{Bmatrix}$ celebration am not an important person

(106) nii (nee) suka yi $\begin{Bmatrix} \text{wa} \\ \text{mini} \end{Bmatrix}$ bikii
it was me they held $\begin{Bmatrix} \text{for} \\ \text{for me} \end{Bmatrix}$ celebration

Some informants feel that pronouns are better in cases like (103)-(104) if the referent is human, or more specific.

In the causative grades, the da which precedes the object is closely linked to the verb and cannot be moved away from it, like the wa/ma dative particle above. Generally, both the object and the

da are deleted, although less commonly the object may be pronominalized.
e.g. (107) and (108) ²³.

(107) zanen da kika sayar (?da shi) jiya ba kai sule gooma ba
the cloth you sold (it) yesterday isn't worth as much as ten
shillings

(108) zanenki (nee) kika sayar (da shi)?
was it your cloth you sold (it)?

(b) In simple PP's (Preposition + NP without locative words),
the NP may be pronominalized, or the whole PP deleted, but the NP
alone may not be deleted, e.g.

(109) wukar da na kan yanka naamaa $\left\{ \begin{array}{l} \emptyset \\ *da \\ da ita \end{array} \right\}$ baa ta da kaifii

the knife I usually cut meat $\left\{ \begin{array}{l} \emptyset \\ *with \\ with it \end{array} \right\}$ is not sharp

(110) babbar wukaa (cee) na kan yanka naamaa $\left\{ \begin{array}{l} \emptyset \\ *da \\ da ita \end{array} \right\}$

its a big knife I cut meat $\left\{ \begin{array}{l} \emptyset \\ *with \\ with it \end{array} \right\}$

I regard the zero-form here as a result of the Pied-Piping
of simple PP's, that is the fronting of a whole larger constituent
which contains the identical NP. Pied-Piping is somewhat uncommon
with da, but it seems obligatory with a - "at", although a is deleted
anyway by the rule of A-DELETION, as in (111) and (112). With ta and

23. The PP da + NP may be subject to Pied Piping (see Section
12 (b)), but in this case it is probably better to say that da is a
verbal suffix inserted where an NP object follows. This process of
absorption of da into the verb has gone much further in other dialects
of Hausa, where new Grade I verbs have been formed like saidaa from
sayar da (see Gouffée 1962).

daga the Prepositions do show up preceding the locative relative pronoun inda as in (113), this is not possible in the focus-emphatic ^{Sentences} since both preposition and relative pronoun would be deleted. Simple PRONOMINALIZATION of NP's following ta and daga without an intervening locative word or garee is ungrammatical²⁴.

(111) gidan da na sauka (*a shii) ran nan babu ruwaa samaam
the house which I stayed (*at it) that day there was absolutely
no water

(112) gidan da baabu ruwaa (nee) na sauka ran nan (*a shii) (*at it)
it was a house that there was no water that I stayed (that day)

(113) taagar nan { ta } inda zaa su fitoo taa yi kadan
 { daga }
 { through }
that window { from/where } they will come out is too small

As has been mentioned, NPs which follow a certain type of locative noun within a PP may undergo deletion, as in (114) and (115). Apart from remarking that these nouns are probably adverbial and not heads of such expressions, I cannot account for this.

(114) zauren da yaaraa ke ciki (nsa) yaa yi dumii
 hut
the entrance which the children are in (it) is warm

(115) zauree (nee) yaaraa ke ciki (nsa)
it is the entrance hut which the children are in (it)

24. a shii is ungrammatical in any case; ga shii is only grammatical in some dialects. The use of garee (which, unlike true prepositions and like verbs, triggers OBJECT CLITICIZATION) is usually confined to [+ HUMAN] NP's.

(c) Either indicative or subjunctive Complements without heads in direct object position allow deletion of NP's within them, e.g.

(116) gaarin da aka cee $\left\{ \begin{array}{l} \text{kun sayaa} \\ \text{ku sayaa} \end{array} \right\}$ ba a nika shi sarai ba

the flour which one $\left\{ \begin{array}{l} \text{said you bought} \\ \text{told you to buy} \end{array} \right\}$ has not been ground completely

(117) gaarin nan (nee) aka cee $\left\{ \begin{array}{l} \text{kun sayaa} \\ \text{ku sayaa} \end{array} \right\}$

it was that flour which one $\left\{ \begin{array}{l} \text{said you bought} \\ \text{told you to buy} \end{array} \right\}$

The deeper the embedding of the identical NP, however, the more likely it is that PRONOMINALIZATION will replace RELATIVE DELETION.

Again, nominalizations reflect the behaviour of headless complements in allowing, in fact preferring, RELATIVE DELETION where they are direct objects as in (118) and (119). This can be accounted for by derivation of nominalizations from headless complements (see Chapter 5, Section 3.4.4).

(118) hatsin da maataataa ta faara $\left\{ \begin{array}{l} ? \text{ nika shi} \\ \text{nikaawaa} \end{array} \right\}$ yanaa cikin rumbuu

the grain which my wife has begun to grind (? it) is in the corn-bin

(119) saabon hatsii (nee) maataataa ta faara $\left\{ \begin{array}{l} ? \text{ nika shi} \\ \text{nikaawaa} \end{array} \right\}$

it is the new grain that my wife has begun to grind (? it)

The fact that EQUI-NP DELETION has operated possibly causing pruning of S may explain why the verbal noun is, as it were, more integrated into the higher S, so that deletion is almost obligatory. The same type of integration combined with strongly preferred deletion is found in "catenative" construction.

(120) gaarin da aka saa kuka { ? sayee shi } ba a nikaa shi sarai ba
sayaa

the flour which one caused you bought (? it) has not been completely ground

(121) gaarin nan (nee) aka saa kuka { ? sayee shi }
sayaa

it was that flour which one caused you bought (? it)

Here it is probably the absence of NP dominating S which allows RELATIVE DELETION to operate more frequently.

7.14 Deletion of Subject NP's.

In the case of subject NP's, it is difficult to determine whether the NP has been pronominalized or deleted, since all personal pronoun subject NP's, whether present in the base or formed by PRONOMINALIZATION are obligatorily deleted by a rule which we call PRO-SUBJECT DELETION. Thus the effects of PRONOMINALIZATION followed by PRO-SUBJECT DELETION would be the same as that of RELATIVE DELETION. But there is a type of example from which it can be determined which of these processes is operative. If the head or focus is equated with the subject of the top S in the clause, and the tense of this S is progressive (the naa/kee/ke tense) or iterative (the kan tense), then the AUX may consist either of a pronominal prefix agreeing with the subject + kee/ke or kan tense marker or simply of kee/ke or kan without the pronominal element, as in (122) and (123).

(122) mu naa baa leeburoorin da { (su) kee } aikii a hanyaa sulee daya
(su) kan yi a awaa

we give the labourers who { are working } on the road one shilling
sometimes work an hour

(123) leeburoorii (nee) $\left\{ \begin{array}{l} \text{(su) kee} \\ \text{(su) kan yi} \end{array} \right\}$ aikii a hanyaa

it is labourers who $\left\{ \begin{array}{l} \text{are working} \\ \text{sometimes work} \end{array} \right\}$ on the road

On the other hand, if the subject NP identical to the head or focus is within an embedded sentence in the clause, the pronominal prefix is obligatorily present:

(124) mu naa baa leeburoorin da ka ga $\left\{ \begin{array}{l} \text{*naa/kan yi} \\ \text{su naa /su kan yi} \end{array} \right\}$ aikii a
hanyaa sulee daya a awaa

we give the labourers who you see $\left\{ \begin{array}{l} \text{are working} \\ \text{sometimes work} \end{array} \right\}$ on the road
one shilling an hour

(125) leeburoorii (nee) ka ga $\left\{ \begin{array}{l} \text{*naa/kan yi} \\ \text{su naa/ su kan yi} \end{array} \right\}$ aikii a hanyaa

it is labourers who you see $\left\{ \begin{array}{l} \text{are working} \\ \text{sometimes work} \end{array} \right\}$ on the road

I propose that in the first case (subjects of top S) the transformation involved is RELATIVE DELETION, and in the second (subjects of lower S) it is PRONOMINALIZATION. What follows is an argument for this position.

Normally, AUX consists of a pronominal element (in agreement with its subject in person, gender and number), and a tense-aspect marker. For some tenses these elements are distinct, for others they are integrated into one morpheme in surface structure. This is expressed by saying that there is a rule of AUX AGREEMENT by which a Pro element agreeing in features with the subject is attached to AUX. This is followed by a rule PRO-SUBJECT DELETION which deletes the subject just in case it is [+PRO]. These rules operate as follows: (— = not applicable, () = optional)

In embedded sentences like (130) in which there is a subject NP coreferential to an NP to its left in a higher sentence, the pronominal prefix may not be deleted.

(130) zaa mu ɖauki leeburoorin koo da ya ke $\left\{ \begin{array}{l} *naa \\ su\ naa \end{array} \right\}$ da wani aikii

we shall hire the labourers although they have other work

Here PRONOMINALIZATION and PRO-SUBJECT DELETION have taken place removing the subject NP of the embedded sentence before it can delete the Pro by AUX-PRO DELETION. This is the same pattern as that found in (124) and (125), where the right-hand NP is not in the top S of the clause.

Where the coreferential NP is the subject of the top S in a relative or focus-emphatic clause, however, AUX-PRO DELETION may apply as we have seen in (123) and (124). This indicates that at the time of the application of AUX-PRO DELETION the subject NP's are present, so the conditions of the rule are met and it applies. The subject NP must therefore be deleted after AUX-PRO DELETION. Now as we have seen, PRO-SUBJECT DELETION must apply before AUX-PRO DELETION in order to allow the latter rule to apply only where there is no subject NP. The transformation which deletes the subject NP is clearly RELATIVE DELETION, which therefore applies after AUX-PRO DELETION and deletes only the subject NP's of the top S in the clause.

It could be objected that the previous argument only works if it is assumed that the condition for AUX-PRO DELETION is the presence of any NP subject, not if the condition is that the subject is [-PRO]. But consider the following sentences in which the relative head and focus respectively are personal pronouns in deep structure.

(131) muu da $\left\{ \begin{array}{l} \text{kee} \\ \text{mu kee} \end{array} \right\}$ aikii baa zaa mu karbi kudiihaka ba
 we who are working will not receive that much money

(132) muu (nee) $\left\{ \begin{array}{l} \text{kee} \\ \text{mu kee} \end{array} \right\}$ aikii a hanyaa
 it is we who are working on the road

Here, too, AUX-PRO DELETION applies in the clause, and since the deep subject is [+ PRO], the feature [- PRO] cannot be the condition for its application.

Let us now examine the ordering of the rules proposed here. We have said that it is RELATIVE DELETION which deletes the subjects of the top S of relative clauses, so PRO-SUBJECT-DELETION cannot precede it and must therefore follow it. But PRO-SUBJECT-DELETION operates within a simple S and RELATIVE DELETION only across S boundaries when the cycle of the S in which the relative head stands is reached. If PRO-SUBJECT DELETION were a cyclic rule, it would apply on the cycle of the embedded relative S and precede RELATIVE DELETION: since it does not, but follows it, it must be a post- or last-cyclic rule. Now in connection with examples (127)-(129) it was shown that AUX-PRO DELETION follows PRO-SUBJECT DELETION. But AUX-PRO DELETION precedes RELATIVE DELETION, in order to generate (122), (123), (131) and (132), and as stated at the beginning of this paragraph, RELATIVE DELETION precedes PRO-SUBJECT DELETION, hence AUX-PRO DELETION precedes PRO-SUBJECT DELETION. Now since AUX-PRO DELETION both precedes and follows PRO-SUBJECT DELETION, AUX-PRO DELETION must be a cyclic rule. Since PRO-SUBJECT DELETION can precede the cyclic rule AUX-PRO DELETION, it cannot be post-cyclic, and must be last-cyclic. The cyclic rule AUX-PRO DELETION also operates on the output of the rule AUX AGREEMENT, therefore AUX AGREEMENT must be cyclic or pre-cyclic.

But if AUX-PRO DELETION were to apply once and for all to a structure in which all S have NP-subjects, all Pro's would be lost for these tenses, which does not happen. Instead, AUX-AGREEMENT must apply again successively after AUX-PRO AGREEMENT restoring the Pro deleted by it on the next cycle. Since it applies before and after AUX-PRO DELETION, AUX-AGREEMENT too must be a cyclic rule. This confirms the cyclicity of AUX-AGREEMENT which is assumed in Chapter 3.

The following derivations may clarify the operation of this set of rules. For the sake of simplicity only the coreferential NP's and the AUX and Cop are shown. RELATIVE FORMATION is not represented: the change of the AUX is shown taking place at the time of RELATIVE DELETION. (133) shows the relevant parts of the derivation of (130), a complex S in which PRONOMINALIZATION takes place. (134) shows the relative clauses in (122) and (131); (135) shows the focus-emphatic S (123) and (132).

(133)

S₁ CYCLE

AUX AGREEMENT

$S_0 \dots \text{leeburoorii}^1 \dots S_1 \left[\text{leeburoorii}^1 \text{naa} \dots \Rightarrow \right.$

$S_0 \dots \text{leeburoorii}^1 \dots S_1 \left[\text{leeburoorii}^1 \text{su naa} \dots \Rightarrow \right.$

(AUX-PRO) DELETION

$S_0 \dots \text{leeburoorii}^1 \dots S_1 \left[\text{leeburoorii}^1 (\text{su}) \text{na} \dots \Rightarrow \right.$

S₀ CYCLE

AUX-AGREEMENT

$S_0 \dots \text{leeburoorii}^1 \dots S_1 \left[\text{leeburoorii}^1 \text{su naa} \dots \Rightarrow \right.$

PRONOMINALIZATION

$S_0 \dots \text{leeburoorii}^1 \dots S_1 \left[\text{su} \quad \text{su} \quad \text{naa} \dots \Rightarrow \right.$

PRO-SUBJECT DELETION(LC)

$S_0 \dots \text{leeburoorii}^1 \dots S_1 \left[\emptyset \quad \text{su} \quad \text{naa} \dots \Rightarrow \right.$

(AUX-PRO DELETION)

$$(134) \quad \begin{matrix} S_0 \\ \vdots \end{matrix} \dots \begin{matrix} NP \\ \vdots \end{matrix} \begin{matrix} \{ \text{leeburoorii} \} \\ \text{muu} \end{matrix} \quad S_1 \begin{matrix} \{ \text{leeburoorii} \} \\ \text{muu} \end{matrix} \quad \text{naa} \Rightarrow$$

S₁ CYCLE

$$\text{AUX-AGREEMENT} \quad \begin{matrix} S_0 \\ \vdots \end{matrix} \dots \begin{matrix} NP \\ \vdots \end{matrix} \begin{matrix} \{ \text{leeburoorii} \} \\ \text{muu} \end{matrix} \quad S_1 \begin{matrix} \{ \text{leeburoorii} \} \\ \text{muu} \end{matrix} \quad \begin{matrix} \{ \text{su} \} \\ \text{mu} \end{matrix} \text{naa} \Rightarrow$$

$$(\text{AUX-PRO DELETION}) \quad \begin{matrix} S_0 \\ \vdots \end{matrix} \dots \begin{matrix} NP \\ \vdots \end{matrix} \begin{matrix} \{ \text{leeburoorii} \} \\ \text{muu} \end{matrix} \quad S_1 \begin{matrix} \{ \text{leeburoorii} \} \\ \text{muu} \end{matrix} \quad \begin{pmatrix} \text{su} \\ \text{mu} \end{pmatrix} \text{naa} \Rightarrow$$

S₀ CYCLE

$$\text{RELATIVE DELETION} \quad \begin{matrix} S_0 \\ \vdots \end{matrix} \dots \begin{matrix} NP \\ \vdots \end{matrix} \begin{matrix} \{ \text{leeburoorii} \} \\ \text{muu} \end{matrix} \quad S_1 \begin{matrix} \emptyset \end{matrix} \quad \begin{pmatrix} \text{su} \\ \text{mu} \end{pmatrix} \text{kee} \Rightarrow$$

AUX AGREEMENT

PRONOMINALIZATION

PRO SUBJECT DELETION

AUX-PRO DELETION

$$(135) \quad \begin{matrix} S_0 \\ \vdots \end{matrix} \quad \begin{matrix} NP \\ \vdots \end{matrix} \begin{matrix} \Delta \\ \vdots \end{matrix} \begin{matrix} \{ \text{leeburoorii} \} \\ \text{muu} \end{matrix} \quad \text{naa...} \begin{matrix} S_1 \\ \vdots \end{matrix} \begin{matrix} NP \\ \vdots \end{matrix} \begin{matrix} \Delta \\ \vdots \end{matrix} \text{Cop} \begin{matrix} S_0 \\ \vdots \end{matrix}$$

S₁ CYCLE

$$\text{AUX-AGREEMENT} \quad \begin{matrix} S_0 \\ \vdots \end{matrix} \quad \begin{matrix} NP \\ \vdots \end{matrix} \begin{matrix} \Delta \\ \vdots \end{matrix} \begin{matrix} \{ \text{leeburoorii} \} \\ \text{muu} \end{matrix} \quad \begin{matrix} \{ \text{su} \} \\ \text{mu} \end{matrix} \text{naa....} \begin{matrix} S_1 \\ \vdots \end{matrix} \begin{matrix} NP \\ \vdots \end{matrix} \begin{matrix} \Delta \\ \vdots \end{matrix} \text{Cop} \begin{matrix} S_0 \\ \vdots \end{matrix}$$

$$(\text{AUX-PRO DELETION}) \quad \begin{matrix} S_0 \\ \vdots \end{matrix} \quad \begin{matrix} NP \\ \vdots \end{matrix} \begin{matrix} \Delta \\ \vdots \end{matrix} \begin{matrix} \{ \text{leeburoorii} \} \\ \text{muu} \end{matrix} \quad \begin{pmatrix} \text{su} \\ \text{mu} \end{pmatrix} \text{naa....} \begin{matrix} S_1 \\ \vdots \end{matrix} \begin{matrix} NP \\ \vdots \end{matrix} \begin{matrix} \Delta \\ \vdots \end{matrix} \text{Cop} \begin{matrix} S_0 \\ \vdots \end{matrix}$$

S₀ CYCLE

FOCUS-RAISING

$$S_0 \left[NP \left[\Delta \left[\begin{matrix} \text{PRO} \\ \text{[WH]} \end{matrix} \right] \left(\begin{matrix} \text{su} \\ \text{mu} \end{matrix} \right) \text{naa} \dots \right] \right] NP \left\{ \begin{matrix} \text{leeburoorii} \\ \text{muu} \end{matrix} \right\} \text{Cop} \right]_{S_0}$$

RELATIVE DELETION

$$S_0 \left[NP \left[\Delta \left[\emptyset \left(\begin{matrix} \text{su} \\ \text{mu} \end{matrix} \right) \text{kee} \dots \right] \right] NP \left\{ \begin{matrix} \text{leeburoorii} \\ \text{muu} \end{matrix} \right\} \text{Cop} \right]_{S_0}^{25}$$

AUX-AGREEMENT

EXTRAPOSITION

$$S_0 \left[\left\{ \begin{matrix} \text{leeburoorii} \\ \text{muu} \end{matrix} \right\} \text{Cop} \left[\left(\begin{matrix} \text{su} \\ \text{mu} \end{matrix} \right) \text{kee} \dots \right]_{S_1} \right]_{S_0}$$

PRONOMINALIZATION

PRO-SUBJECT DELETION

(AUX-PRO DELETION)

This shows that the proposition that RELATIVE DELETION applies to top S subjects in relative and focus-emphatic clauses and PRONOMINALIZATION to lower subjects is compatible with a set of rules which can account for the form of AUX in several types of sentence. It should be noted, however, that the above rules do not provide any proof that RELATIVE DELETION precedes PRONOMINALIZATION.²⁶

25. The placing of RELATIVE DELETION before AUX-AGREEMENT for focus raising solves the problem raised in Chapter 3 Section 6 of how the AUX in a clause with a subject focus agrees with the focus, only where the subject NP is deleted. As it does not cover the cases of PRONOMINALIZATION in which there is the same agreement, it is not a real solution.

26. AUX-AGREEMENT must follow RELATIVE DELETION, but PRONOMINALIZATION may precede AUX-AGREEMENT, or AUX-AGREEMENT and RELATIVE DELETION without affecting the output of these derivations.

7.15. The Conditions on RELATIVE DELETION

It does not appear that any simple statement of the conditions on RELATIVE DELETION is possible. However it is desirable to set out such regularities as can be observed, in the hope that they may eventually be covered by some type of generalization. First, NP's with heads resist deletion (Section 7, 14(a)), so it is possible to say that the rule applies to NP's in structures of the form $NP \left[\begin{smallmatrix} X \\ NP \end{smallmatrix} \right]_{NP}$ only where X is null. This could be collapsed with the restriction on PP's (Section 7, 14(c)), if PP's were considered a type of NP (cf. Postal 1971), although this still fails to account for deletion with locative N's (Section 7, 13(b)). The restriction on subject NP's (Section 7, 14) are of a different kind: DELETION only applies to top S subjects, not to subjects in lower embedded S nor to any NP's within lower embedded subject S. One could express this by saying that in order for RELATIVE DELETION to apply, the path between the copy NPⁱ under Comp and the original must not contain the sequence NP - S-NP (the subject in lower S case) or S - NP - S (the NP within a lower subject S case) unbroken by other nodes. The top S subject is deleted because its path has only S - NP. This is only a valid generalization if NP and S form a natural ^{class} ~~category~~ of categories, as opposed to others (VP etc.).

It might however be possible to extend this approach to the question of embedded S with heads, if it could be shown that either the dominating NP or S is pruned when there is no head. Embeddings with heads would thus contain more nodes of the category NP

or S in their paths and be resistant to deletion for this reason²⁷.

At the moment, however, it is difficult to see how this suggestion would work out in detail.

7.15. Relativization and Focus-Raising.

This chapter has presented a substantial amount of evidence that a generalization can be made about relative and focus-emphatic clauses. It is true that little of this evidence has a direct bearing on the issue between the focus-raising and focus-fronting analyses (discussed in Section 1), concerning the explanation of the similar behaviour of these two types of clause. Two points, however, deserve to be brought out.

(a) The fact that the restrictions on the modal properties of the clause are also valid for S-focus sentences (see Section 6), might indicate that these restrictions are not part of the conditions on any movement transformation, but rather on the structure $NP [NP [S]]_{NP}$. The focus-fronting approach would fail in that case, since it would not propose such a structure as part of the derivation of focus-emphatic S.

(b) Here only the movement of NP's (and simple PP's by Pied-Piping) has been considered since these are the only elements front-shifted in relative clauses in Hausa. Pied-Piping of other elements such as an NP or VP dominating the identical NP is completely prohibited.

27. cf. the suggestion that pruning or the absence of dominating NP or S may make deletion more frequent in nominalizations and "catenatives" made at the end of Section 12. At the other end of the scale, it is probably significant that the degree of acceptability of relative and focus-emphatic S with pronouns depends on the same factors: subject position, presence of head, depth of embedding.

e.g:

(136) *ruwan nan guugar wanda zan deeboo ya naa da sanyii
that water a bucket of which I shall draw is cold

(137) *ruwan nan deeboo wanda na fi soo yanaa da sanyii
that water to draw which I prefer is cold

In focus-emphatic S, on the other hand, V's, VP's, complex PP's etc. may become the focus. One could argue that the restriction on fronting in relative clauses is conditioned by the presence of an NP head which ensures that only NP's are frontshifted, whereas there is no such restriction of focus-emphatic S. This is not fully accurate, since simple PP's are also fronted: this problem could be avoided by saying that simple PP's are their constituent NP's with a case-feature in underlying structure. But there is a case, too, for saying that Pied-Piping also occurs in focus-emphatic S i.e. that the syntactic surface focus is sometimes a larger constituent containing the underlying focus. This can be illustrated in special questions, which I take to be a form of focus-emphatic S in Hausa. Here, as well as the question in which the WH-word, which is presumably the focus, is extracted from a complex NP leaving a pronominal copy as in (138), there is the question like (139) in which the whole complex NP containing the WH-word takes the leftmost position.

(138) waa (nee nee) ka sayoo motarsa
who (be) you bought his car?

(139) mootar waa (nee nee) ka sayoo?
car of who (be) you bought?

If (139) is a true case of Pied Piping, this shows that the class of constituents containing focus elements which undergo Pied Piping is larger than the class which undergoes Pied Piping as a result of frontshifting in relative clauses, which consists of simple PP's alone. If the operation of Pied-Piping is so different in the two cases, it is unlikely that the same transformation could account for both processes. But focus-fronting would have to claim this if it were to equal focus-raising in adequacy.

CHAPTER 8

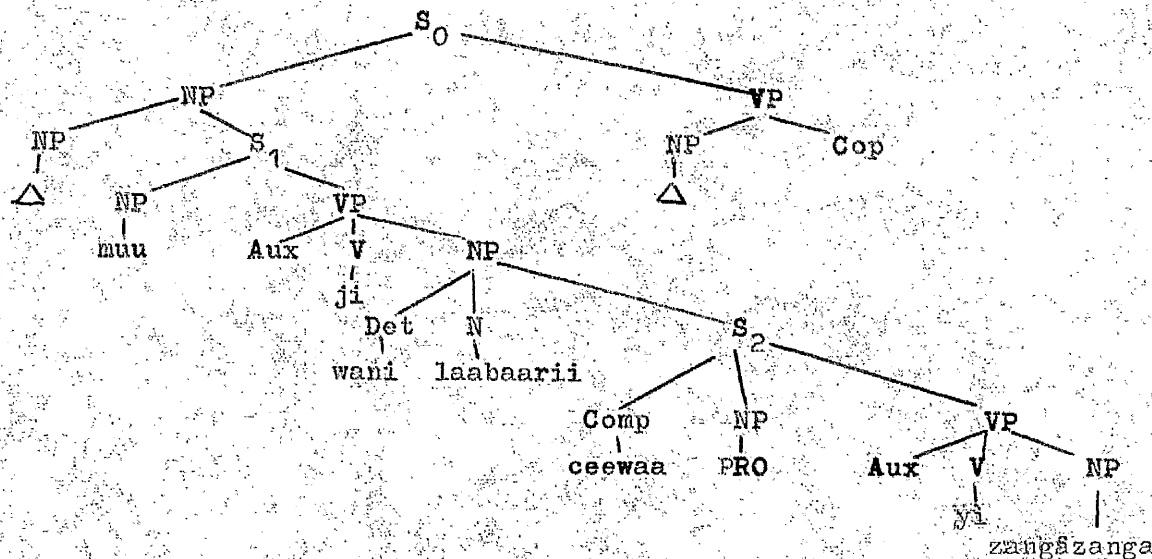
CLEFT EXTRAPOSITION, COMP-DELETION and COPULA DELETION

8.1 CLEFT EXTRAPOSITION

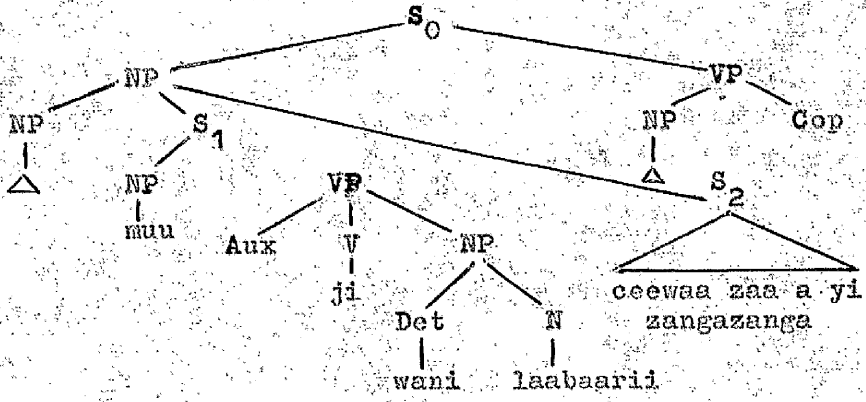
CLEFT EXTRAPOSITION converts the pseudo-cleft structure created by FOCUS-RAISING and RELATIVE FORMATION into the cleft structure; COMP-DELETION and optional COP-DELETION then create the surface structures typical of Hausa focus-emphatic sentences. It has been shown in Chapter 4 that CLEFT EXTRAPOSITION precedes RELATIVE CLAUSE EXTRAPOSITION on the cycle, although that ordering is reversed when RELATIVE CLAUSE EXTRAPOSITION operates on the cycle before CLEFT EXTRAPOSITION. No crucial ordering relation within the cycle has been proved between CLEFT and COMPLEMENT EXTRAPOSITION however. In order to generate a sentence like (1), using the focus-raising approach, EXTRAPOSITION of the complement can be said to take place on the lower cycle (S_1) converting (2) into (3), and only on the higher cycle (S_0) does FOCUS-RAISING take place raising wani laabaarii, not the complement S to form (4) followed by the subsequent transformations by which the head is moved to the left away from the extraposed S to yield (5).

- (1) wani laabaarii (nee) muka ji ceewaa zaa a yi zangazanga
a story (be) we heard that one will hold a demonstration

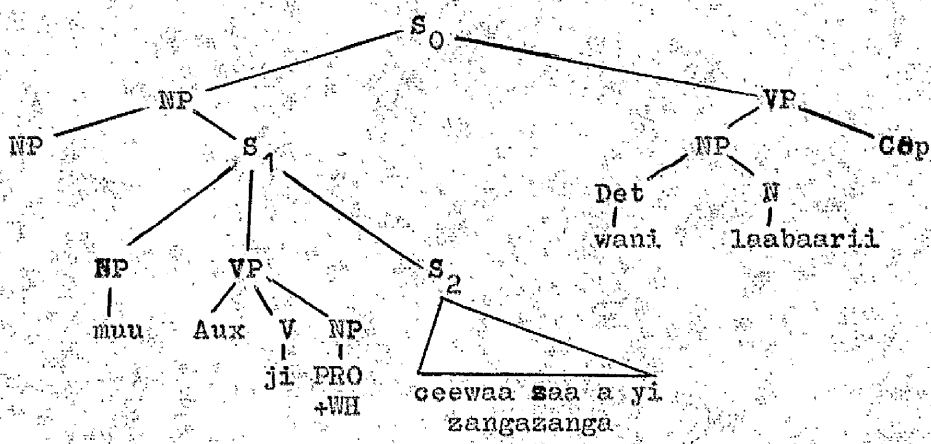
(2)



(3) (2) COMPLEMENT EXTRAPOSITION (on S₁)

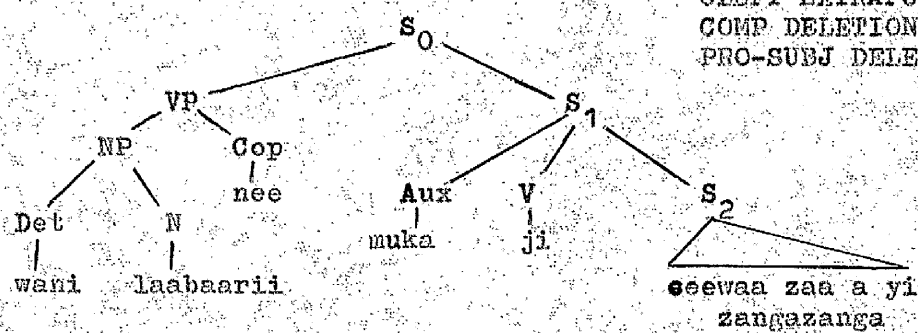


(4) FOCUS RAISING (on S₀)



(5)

RELATIVE FORMATION,
CLEFT EXTRAPOSITION
COMP DELETION
PRO-SUBJ DELETION



Since the CLEFT and COMPLEMENT EXTRAPOSITION do not seem to be crucially ordered, and they both involve movement of S from NP (although from a different structure), one might be able to collapse the two rules, thus making a saving in the grammar. They do occur at about the same point in the rule-ordering e.g. both follow COPULA AGREEMENT (see Chapter 3, Section 10) and precede COPULA DELETION (see the following sections of this chapter). Bagari (1972) has shown that COMPLEMENT EXTRAPOSITION must apply twice to sentences like (6) to produce the surface sentence (7), so the rule is cyclic.

- (6) ceewaa Audu zai tafi Kanoo mai yiwuwaa nee gaskiyaa nee
that Audu will go to Kano is possible is true
- (7) gaskiyaa nee mai yiwuwaa nee (ceewaa) Audu zai tafi Kanoo
(it) is true (it) is possible (that) Audu will go to Kano

Similarly, CLEFT EXTRAPOSITION must apply twice, i.e. once to the matrix and once to the embedded copular sentence, to produce (9) from (8).

- (8) [innaa jin [kaa mutuu nee] nee]
I feel you died be be
- (9) jii na kee mutuwaa ka yi
feeling I am dying you did i.e. I had the feeling you'd died

Further we know that the focus-emphatic rule cannot apply more than once on any one cycle e.g.

- (10) * $\left\{ \begin{array}{l} \text{mutuwaa jii} \\ \text{jii mutuwaa} \end{array} \right\}$ na kee ka yi
 $\left\{ \begin{array}{l} \text{dying feeling} \\ \text{feeling dying} \end{array} \right\}$ I am you did

Therefore this rule is probably cyclic too, like the other types of EXTRAPOSITION.

These facts show that there is no evidence available against

collapsing CLEFT and COMPLEMENT EXTRAPOSITION; on the other hand there are no overwhelming arguments for it.

8.2. COMP-DELETION

The node Comp (complementizer) is generated by the phrase structure rules (Appendix I) as the leftmost constituent of S. It may dominate an empty NP node which can be filled by V (X) in the case of nominalization or by an NP with a +WH feature in the case of relative clauses. DA-INSERTION adds the link -n/-t (\Rightarrow r or gemination), in certain circumstances, and the particle dà to the [+WH] element to create either the full relative pronouns if the NP becomes a [+WH] pronoun (wanda, wadda, inda, yadda etc.) or simply -n dà or -r dà attached to the head if the [+WH] element is deleted¹.

1. It may be doubted whether wanda etc and particularly -n dà etc really belong to the embedded S, as they seem quite closely bound to the head NP. One indication of this is that where a pause occurs in performance in relative clauses it nearly always follows the relative element e.g.

(A) { kaaton da
 kaatoo wanda } aka zoo da shii
 the big man whom ... one came with him

(B) ? { kaaton } { dà } aka zoo da shi
 { kaatoo } { wanda }
 the big man whom one came with him

Further the quantifier duk - "all" or Wh-ever" which may be displaced to the beginning or end of sentences, may occur following the relative elements e.g.

(C) { kaaton da } duk aka zoo da shii
 { kaatoo wanda }
 whichever big man one came with him

The facts may either be due to some late readjustment of relative clause structure, or to the fact that the rule which generates Comp is not (D) as proposed by Emonds (1969), but (E) as proposed by Bresnan (1971) i.e. with an additional S of some kind dominating the Complementizer (however the symbol \bar{S} appears to have been introduced simply to prevent recursion on S)

(D) S \longrightarrow Comp NP VP etc
(E) \bar{S} \longrightarrow Comp S

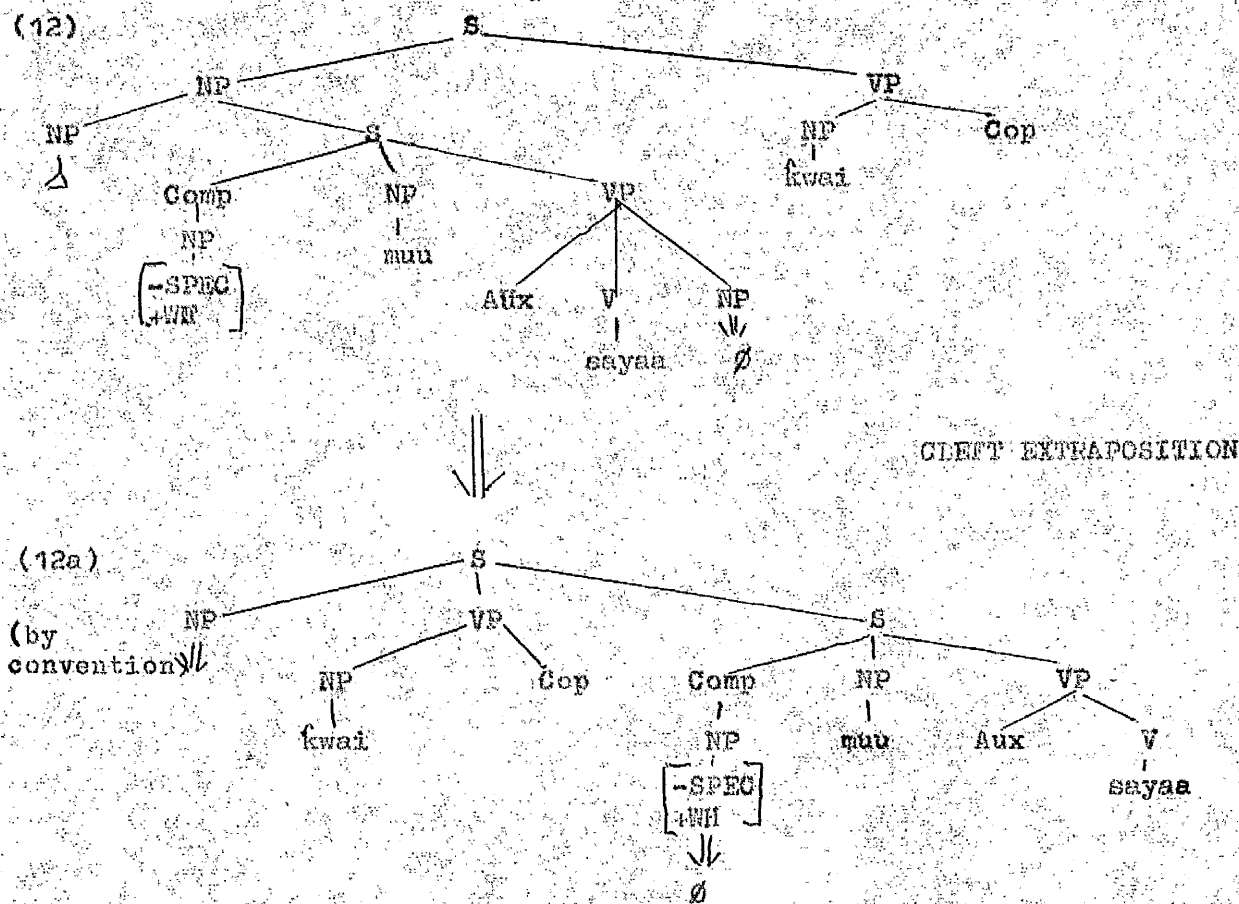
In the clause of focus-emphatic sentences no such relative complementizer is present, although such an element is obligatory in the subject NP of pseudo-clefts, which is presumably also a headless relative clause as defined in Chapter 6, Sections 4-7.

- (11) { abin da } muka sayaa kwai nee²
 wanda
 what we bought was eggs

- (11a) *muka sayaa kwai nee
 we bought eggs be

It is reasonable then to propose a COMP-DELETION transformation which removes the relative element just in case the clause has undergone CLEFT EXTRAPOSITION i.e. where Comp is dominated by S not NP [S] NP as in (12) derived from the pseudo-cleft (12a).

2. There is a slight difference in meaning between the variants here. wanda implies that there is a choice between a fairly well-defined set of several alternatives (i.e. the question was wannée? "which?" sc. to buy), whereas abin da (lit. "thing that") has no such implication, the question being mee "what?" (to buy). In terms of the deep structure of headless relatives, I would guess that the [-SPEC] NP which underlies wanda is something like wane [+WH] (which) + a pronominal N which is variable in reference and is interpreted as referring to any limited set presupposed in the discourse. This type of N is deleted automatically and before the rule can apply which converts wane to wannée where no NP follows, DA-INSERTION has applied to create wane -n da \Rightarrow wanda. With abin da, the underlying [-SPEC] NP is wane abuu ("which thing"), where abuu is a pro-N which refers to all [-HUMAN] NP's. Before wane abuu can be converted into mee (what), DA-INSERTION applies, on this occasion deleting the [+WH] determiner wane since the NP has head N (cf. hanyar da in Chapter 6, Section 6) and adding -n da to form abin da.



If COMP-DELETION precedes DA-INSERTION, the latter would not apply.

Although this particular type of COMP-DELETION rule cannot draw on much support apart from the focus-raising derivation itself, it is at least potentially better motivated than the deletion of the pronominal relative head proposed by Dagari to account for the form of the clause. While deletion of the relative head NP is unique as a syntactic phenomenon, deletion of the complementizer is encountered in two other syntactic rules: KOO-DELETION and CEEWAA-DELETION (cf. ^{this chapter} Section 10, Chapter 6, Section 5).

The conditions on CEEWAA-DELETION in particular are similar to those on CLEFT COMP-DELETION: in most dialects it cannot apply where the complement S is embedded in the subject NP (e.g. in (13)), only where the complement S is extraposed (e.g. in (14)).

(13)(a) ceewaa maalamin nan yaa rigaa ni zuwaa yaa baa ni maamaakii
that the teacher arrived before me surprised me

(b) *maalamin nan yaa rigaa ni zuwaa yaa baa ni maamaakii

(14) gaskiyaa nee (ceewaa) maalamin nan yaa rigaa ni zuwaa
it is true (that) that teacher arrived before me

8.3. COPULA DELETION

Throughout this thesis, it has been assumed that focus-emphatic sentences with and without the copula nee/cee following the focus are optional, synonymous variants. The evidence for this is quite substantial, and need not be recapitulated here, since it is plain in the use of brackets around nee/cee marking optionality in nearly all the examples quoted that the meaning and the syntactic behaviour of the two sentence-types is the same. It is true that where certain elements are foci, the omission of the copula is highly preferred, but the copula remains grammatical if inserted nevertheless. This is particularly true where verbal elements (V, VP, or adverbial nouns of state) are foci e.g. (15) and (16), but here the query represents a form of markedness rather than acceptability.

(15) kwantaawaa (? nee) mu kee
lying down (be) we are (action)

(16) (a) kwance (? nee) mu kee
lying down (be) we are (state)

On the other hand, the insertion of nee/cee may be highly preferred in other cases: this is usually the case where its omission

would produce ambiguity as between the emphatic and non-emphatic sentences e.g. where a subject NP is focus the AUX in the clause may indicate this fact alone as in (17) where the tense is progressive; but where the tense is Future I which does not change its form when [+REL], the copula is necessary to show that the sentence is emphatic, as in (18).

- (17) mutaanenmu kee yin bikii
it's our people who are celebrating
- (18) mutaanenmu nee zaa su yi bikii
it's our people who will celebrate 3.

Where two sentence structures are so closely related, the most obvious way of relating them is by a transformation: following on the focus-raising analysis we can say that the underlying form is that with the copula; COPULA DELETION then applies optionally to structures which have undergone CLEFT EXTRAPOSITION to produce the alternate surface form. Focus-fronting handles the data in a different way: Cop is generated as an optional constituent of verbal S in the base and, if present is moved along with the focus to the left by FOCUS-FRONTING. It is conceivable that the focus-fronting approach could be altered so that fronting occurs only when nee is present; then an optional COPULA DELETION transformation would be needed to produce the emphatic sentences without the copula. However, this would of necessity detach FOCUS-FRONTING from fronting in relative clauses, unless all relative clauses were said to contain nee, which is highly improbable. Such a change would thus require the abandonment

3. In certain types of subordinate clause e.g. conditionals nee seems to be preferred. The data I have are not clear enough to make a reliable statement of these features.

of the claim that the two types of fronting are identical, which could be one of focus-fronting's strongest points.

Here I will argue for the transformation COPULA DELETION on two grounds (a) that certain restrictions on focus-emphatic sentences - particularly some restrictions associated with negation - can be more easily described if they are analyzed as having a copular form containing Cop in underlying structure (Sections 8.4-8), and (b) that there is independent motivation for this rule in other constructions (Section 8.9-10). This argument is an indirect argument for an approach which proposes an underlying copular structure, i.e. either the pseudo-cleft or the focus-raising analysis. Since the former has been rejected in Part II, it lends support to focus-raising.

8.4. Restrictions on S-Focus Sentences

"S-focus" sentences are those which consist of a verbal sentence followed by nee with the meaning roughly "the fact/the case is S", i.e. where some state of affairs is presupposed to exist which is relevant to the discourse, and the speaker identifies that state of affairs⁴. It was noted in Chapter 7, Section 7 that there are certain restrictions on the type of sentence which may be followed by

4. S-focus sentences like "it is that he went home last night" do occur in some dialects of English, but they are marginal. For some reason such sentences are more acceptable with modal auxiliaries, negation or interrogation e.g. "it may be/it is not/ is it that he went home last night". Such sentences, in Hausa and in English, usually imply that what is stated in the sentence has some causal connection with a known situation.

nee, as statements, although not as questions⁵, which are the same as the restrictions on relative clauses. Consider first the simple copular S, either with or without subject, the copular S which has been inverted by PREDICATE EMPHASIS, the S-focus S and the focus-emphatic S with or without the copula, all of which are ungrammatical as statements when followed by S-focus nee, as in (19), (20), (21) and (22) respectively.

- (19) *(Musa) maalamii nee nee
Musa malam be be
- (20) *maalamii nee Muusa nee
malam be Musa be
- (21) *mun bi maalamii nee nee
we followed a malam be be
- (22) *maalamii (nee) muka bi nee
a malam (be) we followed be

What is interesting here is that the version of (22) without the copula following ^{the focus} is still ungrammatical. The emphatic sentence behaves just like a copular S with regard to restrictions on occurrence in S-focus context. This indicates that focus-emphatic sentences are to be analyzed as copular S in underlying structure.

Focus-fronting would oppose this reasoning by saying that (19), (20), (21) and (22) are simple sentences of which nee is a part,

5. I cannot explain why these restrictions are lifted in the case of questions, except that perhaps the final interrogative nee? has ceased to be the copula, and has become a pure question element. This phenomenon might be connected with the fact that the copula appears to be repeated following some WH-question words e.g. wàa (nee nee) - who?, nee (nee nee) - what? cf. double clefting in French questions, qu'est-ce que c'est que ...

not a copula in a higher sentence as in focus-raising. The rule is simply that only one Cop is generated in a simple S by the phrase-structure rules: this rules out (19), (20), (21) and the version of (22) with two copulas. The version of (22) with only one copula is ruled out by the FOCUS-FRONTING rule by which Cop must be moved along with the focus constituent. Despite the simplicity of this explanation, it cannot encompass the other restrictions shared by S-focus, focus-emphatic and relative S, which would have to be stated as on the one hand deep structure constraints on the appearance of nee in sentences with, say AUX [+ SUBJ], and on the other as conditions on fronting. Focus-raising at least offers the possibility of collapsing the two into a set of constraints on AUX and Cop in $NP [NP S]_{NP}^6$.

8.5. Polar Conjunction

There is a frequent use of focus-emphatic sentences

6. I have come to feel that focus-fronting offers the most attractive solution in this case, as it relies exclusively on transformational rules, not the kind of additional apparatus required by focus-raising, although this does not mean that focus-fronting is superior generally. The extended view of focus-fronting can be used, in addition to the cases already mentioned, to explain a dialect I found in which copular S of the form NP - NP - Cop or NP - Cop are ungrammatical as non-restrictive relative clauses, but copular S in which the predicate has been frontshifted (NP - Cop - NP) are grammatical e.g.

(F) *Maryamu wadda (ita) babbarsu cee ...

Maryamu who (she) their senior be

(G) Maryamu wadda ita cee babbarsu

Maryamu who she be their senior

The explanation for this may be that fronting of the identical element here pronominalized to become ita together with the copula is obligatory in such clauses in this dialect. Generally, RELATIVE REDUCTION involving deletion of everything in the clause except the predicate NP is obligatory, producing adjectives and appositive NP's like Maryamu babbarsu - "M. their senior" in this example. One might even suggest that the absence of AUX and S-focus nee in the same S is due

[+ SUBJ]
to their obligatory coalescence to form the progressive tense (see Appendix I)

in which two sentences are conjoined in which the clauses are the same and the focus elements are different items of the same category, one being negated and the other affirmed, i.e. it is X that Z it is not Y that Z, or it is not X that Z, it is Y that Z. e.g. in Hausa⁽²³⁾ for the second type.

- (23) baa daariyaa cee su kee yii ba, kuukaa nee su kee yii
it is not laughing they are doing it is crying they are doing

As in English, the second half of the conjunct is usually reduced by deleting the clause by identity with the clause in the first half, yielding (24).

- (24) baa daariyaa cee su kee yii ba, kuukaa nee
it is not laughing they are doing, it is crying

Now in the first half the copula may be omitted, since it is followed by the clause, but in the second half the copula cannot be removed as the clause has been deleted⁷.

- (25) baa daariyaa su kee yii ba, ^{*kuukaa} kuukaa nee
(it is) not laughing they are doing ^{*crying} it is crying

In order to preserve the symmetrical form of the conjunction it is necessary to derive (25) from (24), i.e. to propose a rule of COPULA DELETION for focus-fronting, however, these two sentences have different

7. Alternatively, the second reduced clause may be of the form sai + focus e.g.

- (H) baa daariyaa (cee) su kee yii ba, sai kuukaa
not laughing they are doing, only crying.

The second clause here is also focus-emphatic of the sai + focus type mentioned in Chapter 1, Section 1.5. Focus-raising would probably analyse these sentences as containing a post-focus copula which is obligatorily deleted.

deep structures, (24) with, and (25) without Cop, so that they cannot be said to be symmetrical. Since some kind of symmetry of total structure is one of the conditions of CONJUNCTION REDUCTION, as well as identity of elements, the focus-fronting approach would be disadvantageous⁸.

8.6. Negation in Focus-Emphatic Sentences

In focus-emphatic sentences, negation may be attached to the focus, baa preceding the focus and ba either following the clause (26) or less commonly preceding the copula (27), or less commonly still, following the copula and preceding the clause (28), or it may be attached to the clause in which case the initial baa is attached to AUX and modified accordingly (29).

- (26) baa Maitama (nee) mutaanee suka zaabaa ba
 it was not M. that the people chose
- (27) baa Maitama ba (nee) mutaanee suka zaabaa }
(28) baa Maitama (nee) ba mutaanee suka zaabaa } = 26⁹
- (29) Maitama (nee) mutaanee ba su zaabaa ba
 it was M. that the people did not choose

8. e.g. a focus-emphatic sentence cannot be reduced where it is conjoined to the right of a non-emphatic S as in (I) (where the VP's are identical in underlying structure except for the $[-\text{REL}]$ feature on AUX)

- (I) * Audu ya naa son keeken nan, baa Muusa ba nee
 Audu wants that bicycle, it is not Musa (sc. that wants that bicycle)

9. In the present treatment (27) and (28) would be regarded as derived from (26) by RIGHT SHUFFLE, which moves the extraposed clause to the right of ba and nee. As to the ordering of ba and nee, it is difficult to decide which is their deep ordering in Copular S, or whether the ordering is optional in the base. The switch in their order cannot be carried out by RIGHT SHUFFLE anyway, since only ba is an S-daughter, and nee within VP.

The meaning of (26), (27) and (28) is quite different from that of (29), as can be seen from the translation. In (26), the presupposition is "they chose someone", in (29) "they did not choose someone". For focus-raising the neg is attached to the higher (copular) S in the deep structure of (26), and to the lower S in (29). These two structures which differentiate the meaning of the sentences are (30) and (31) respectively, which are also the sources of the two S-focus sentences (32) and (33), which also reflect the different levels of neg.

(30) $S_0 \left[\begin{array}{c} \text{neg} \\ \text{NP} \end{array} \left[\begin{array}{c} \Delta \\ S_1 \end{array} \left[\begin{array}{c} \text{mutaanee AUX zaab Maitama} \end{array} \right] \right] \left[\begin{array}{c} \Delta \\ \text{NP NP NP} \end{array} \right] \text{Cop} \right] S_0$

(31) $S_0 \left[\begin{array}{c} \text{NP} \left[\begin{array}{c} \Delta \\ S_1 \end{array} \left[\begin{array}{c} \text{neg mutaanee AUX zaab Maitama} \end{array} \right] \right] \left[\begin{array}{c} \Delta \\ \text{NP NP} \end{array} \right] \text{Cop} \end{array} \right] S_0$

(32) baa mutaanee sun zaabi Maitama ba (nee) ¹⁰
the fact is not that the people chose M.

(33) mutaanee ba su zaabi Maitama ba nee
the fact is that the people did not choose M.

The focus-fronting approach advances a simple S structure for focus-emphatic sentences. In order to account for the difference in meaning it must therefore allow neg to be generated at two different points in the sentence. If this is generalized to cover the S-focus sentences, the two types would appear to be S-negation (32) and VP -

10. nee ba is also a possibility. baa S ba as a question implies that the truth of S has been presupposed and invites the hearer to reject any doubts which may have appeared. cf, English "is it not so that "

negation (33)¹¹.

There is another problem for focus-fronting in (27) and (28). With focus-raising, the ordering of ba can be accounted for either by the random placement of extraposed S with respect to right S-daughters, or more plausibly, by the movement of the extraposed S by RIGHT SHUFFLE. With focus-fronting, on the other hand, the so-called clause i.e. the remainder of the S when the focus has been moved, is not even a constituent, so the position of ba would have to be described by a modification of FOCUS-FRONTING such that ba optionally travels ^{left} with the focus.

8.7. KOO-words in Negative Contexts.

Although the arguments presented so far against focus-fronting are not very strong, as will be obvious from footnotes 6 and 11, a stronger argument is available based on the behaviour of KOO-words, treatment of which requires a fairly detailed explanation. These words consist of a prefix koo- and a WH-word, e.g. koowaa, koomee, koowane etc. They have two different meanings depending on the syntactic environment in which they are found: (i) normally, they have an "every" meaning e.g.

11. That negation can have differing scopes other than S have been suggested by a number of linguists, although the scopes are often provided by semantic interpretation rules rather than in the base in recent work. (e.g. Jackendoff 1989b). It is interesting that in Hausa, my informants do not accept negation both on the focus and the clause e.g.

(J) * baa mutane ba su zaabi Maitama ba
it is not that the people did not choose Maitama

(n.b. where two final ba's are adjacent one is obligatorily deleted). This could be a strong argument for a single-sentence analysis of focus-emphatic sentences (i.e. focus-fronting) and for one neg. marker per sentence. To provide for S- and VP-negation, neg would have to be attached either to VP or S by a transformational rule which would change meaning (cf. Kuroda 1969)

(34) maalamai sun duuba { koowaa
koomee
koowane littafii }

the teachers looked at { everyone
everything
every book }

but (ii) in certain "affective" contexts, principally in negative sentences, they have the "any" - meaning e.g.

(35) maalamai ba su duuba { koowaa
koomee
koowane littafii } ba

the teachers did not look at { anyone
anything
any book } 12

The presence of KOO-words with an "any" meaning results from a specific syntactic environment, rather than the presence of neg simply in the sentence, for KOO-words with "any" -meanings cannot occur as subjects of negative sentences.

(36) * { koowaa
koomee
koowane littafii } bai yi kyau ba

{ noone
nothing
no book } is nice

12. It might be suggested that "every" - and "any" KOO-words are in fact the same, and the difference in interpretation is wholly attributable to the effect of negation, i.e. "for every x, the teachers did not look at x" means precisely "the teachers did not look at any x", whereas the English sentence "the teachers did not look at every x" is interpreted as "for not-every x, the teachers looked at x". The present data could then be reworked in terms of the distinction between negation on quantifiers attached to arguments and negation on the predicate. I doubt this, as the same ambiguity appears in non-negative "affective" environments e.g. conditionals, where KOO-words have two distinct meanings

(K) in koowaa yaa zoo, baa zan daamu ba
if { anyone } comes, I won't be disturbed
{ everyone }

Instead baabu (baa) "there is not" + a relative clause is substituted for the missing (36) (see Chapter 6, Section 8)

- (37) $\left. \begin{array}{l} \text{wanda} \\ \text{abinda} \\ \text{littafin da} \end{array} \right\} \text{baa} \quad \text{ya yi kyau}$
 there is not $\left\{ \begin{array}{l} \text{one who} \\ \text{thing which} \\ \text{book which} \end{array} \right\}$ is nice

Following baabu/baa the negative progressive baa and the negative possessive baa, too, KOO-words have an "any" - meaning.

- (38) $\left\{ \begin{array}{l} \text{koowaa} \\ \text{koomee} \\ \text{koowane littafii} \end{array} \right\} \text{baabu} \quad \text{a gidaa}$
 there is $\left\{ \begin{array}{l} \text{not anyone} \\ \text{not anything} \\ \text{not any book} \end{array} \right\}$ at home

- (39) baa naa tafi yaa koo inaa
 I am not going anywhere

- (40) [^]baa shi da koomee
 he hasn't got anything

The generalization here seems to be that following baabu or baa or baa or between baa and ba, a $\left[\begin{array}{c} -\text{SPEC} \\ +\text{WH} \end{array} \right]$ word becomes a KOO-word.¹³

The transformation which makes this change, which will be called KOO-WORD FORMATION, is in some ways parallel to the some-any rule in English. It operates before RIGHT SHUFFLE, since an "any" interpretation is still possible for KOO - words moved to the right of the second ba by this late rule,

13. If higher negatives were accepted baabu could be said to be the source of all these neg markers.

approach were used, the deep structure would be a simple negative sentence. If this sentence were one with VP-negation, like (33) the interpretation of the KOO-word would be "any" -; so the source of the semantic interpretation of (43) cannot be (44)

- (44) baa naa bukaatar $\left\{ \begin{array}{l} \text{koowaa} \\ \text{koomee} \\ \text{kowane yaaroo} \end{array} \right\}$
- I don't need $\left\{ \begin{array}{l} \text{anyone} \\ \text{anything} \\ \text{any boy} \end{array} \right\}$

If, on the other hand, the deep structure of (41) involves S-negation, the KOO-words do have an every-interpretation

- (45) baa nnaa bukaatar $\left\{ \begin{array}{l} \text{koowaa} \\ \text{koomee} \\ \text{kowane yaaroo} \end{array} \right\}$ ba
- it isn't that I need $\left\{ \begin{array}{l} \text{everyone} \\ \text{everything} \\ \text{every boy} \end{array} \right\}$

If, then, this type of structure is the deep structure of focus-emphatic sentences with negated focus, we must explain why the KOO-words in (45) and (43) have the "every" interpretation when they are in a baa ... ba context. The focus-raising approach provides an answer: there are sentences which parallel (43) and (45) ((46) and (47)), which have the same meaning but which include the copula

- (46) baa $\left\{ \begin{array}{l} \text{koowaa} \\ \text{koomee} \\ \text{kowane yaaroo} \end{array} \right\}$ nee na kee bukaataa ba
- (47) baa nnaa bukaatar $\left\{ \begin{array}{l} \text{koowaa} \\ \text{koomee} \\ \text{kowane yaaroo} \end{array} \right\}$ ba nee

As we have seen, KOO-words in negative copular S do have an "every" - meaning. Focus-raising derives (43) from (46), by COP-DELETION, and

(45) from (47) by a similar rule. The semantic interpretation may then take place before the deletion of the copula¹⁴. Under the focus-fronting approach, however, (43) would be derived directly from (45), without a copula at any stage, so that the restriction remains unexplained. This argument for COP-DELETION thus indirectly supports the focus-raising approach.

Compare this with the situation when a KOO-word is the focus and the clause is negated. The KOO-word then receives neither the "any" nor the "every" interpretation: the sentence is ungrammatical.

- (48) *koomee (nee) ban saamu a cikin akwaatin ba
 it was {anything } that I didn't find in the box
 (everything)

If the corresponding non-emphatic sentence (49) which forms part of the deep structure of (48) both in the focus-raising and focus-fronting approaches, the KOO-word does occur with an "any" meaning, since it is in the required negative context.

- (49) ban saami koomee a cikin akwaatin ba
 I didn't find anything in the box

What seems to be happening here is that koomee in (48) must have originated in a negative context inside (49); thus, the "every"-reading is disallowed. On the other hand, koomee with an "any" - meaning cannot occur outside a negative context in the derived structure (48). Thus both readings are blocked.

The problem remains: how can this be formalized within the

¹⁴. In the next section it is suggested that some types, at least, of semantic interpretation rules apply at an intermediate level before EXTRAPOSITION and COP-DELETION (in the focus-raising analysis) i.e. at the pseudo-cleft stage.

theory? The restriction seems to operate at two places: before and after FOCUS-RAISING or FOCUS-FRONTING. Again, we have the advantage with the focus-raising approach, that the constraint can be considered cyclical in its application. But again if this constraint is in fact a semantic interpretation rule it is a strange one, since it operates between two transformational rules FOCUS-RAISING and COP-DELETION. Of course, the latter might be considered a post-cyclic rule, since there is no evidence to hand that it is cyclic. Also, as we have assumed that "every" - KOO-words are generated in the base, and "any"-KOO-words by a transformation which changes $\begin{bmatrix} -\text{SPEC} \\ +\text{WH} \end{bmatrix}$ pronominal forms, it is difficult to see how a semantic interpretation rule alone can rule out one or the other of these by reference to environment. What is needed is rather either a constraint on the appearance of these elements in specific environments applying at different levels, or a condition on the transformations involved. One solution would be to say that KOO-WORD FORMATION is a last-cyclic transformation applying after FOCUS-RAISING. After the $\begin{bmatrix} -\text{SPEC} \\ +\text{WH} \end{bmatrix}$ element has been raised into the higher S, however, KOO-WORD FORMATION cannot apply since the element is no longer in a negative context. Since $\begin{bmatrix} -\text{SPEC} \\ +\text{WH} \end{bmatrix}$ elements cannot appear in surface structure except in questions, the "any"-version is ruled out, and a deep structure constraint is needed to block the occurrence of an "every" KOO-word in a negative context.

Whatever the decision on such matters, the conclusion must remain that KOO-words with an "every" meaning as focus NP's originate in copular S, but can appear in the surface form apparently outside this context, but KOO-words with an "any" -meaning which originate in negative verbal S cannot move outside this context. This supports both the existence of the COP DELETION rule and the focus-raising view of focus-emphatic deep structures as consisting of two sentences: a verbal and a copular S.

3.8. The Indefinite Specifier in Negative Contexts

Now, another set of elements which may have an "any" - meaning in negative contexts is the indefinite specifier wani/wata/ wadansu + nominal - "some (other) X" e.g.

- (50) Musa bai ga wani abu a cikin akwaatin ba
Musa didn't see anything in the box

As with KOO-words, the "any" - meaning is not common in the predicate of copular sentences. Indeed baa wani abu ba nee - it is not something (else) has an idiomatic meaning of it is not something extraordinary or to be reckoned with, e.g.

- (51) abin da Musa ya gani a cikin akwaatin baa wani abu ba nee
what Musa saw in the box was {nothing (literally)}
not something special

This meaning is reflected exactly in the focus-emphatic (cleft) sentence (52) even where there is no copula present.

- (52) baa wani abu (nee) Muusa ya gani a cikin akwaatin ba
it was {*nothing } that Musa saw in the box
not something special

But wani abu in a positive verbal sentence embedded in a negative copular sentence does not have the same implications as (52)

- (53) baa Muusa yaa ga wani abu a cikin akwaatin ba
it is not that M. saw something in the box

It looks as if the pseudo-cleft structure (51) is capable of adding a shade of meaning to the semantic interpretation which is not present in the deep structure. This lends support to the focus-raising approach, since there is no pseudo-cleft structure in the focus-fronting derivation, and especially as the idiomatic meaning arises from the copular sentence, which focus-fronting maintains plays no part in focus-emphasis. It also further strengthens the arguments for COP-DELETION, since if focus-emphatic S are copular S at some stage in their

derivation the copula must be optionally deleted at a later stage.

8.9. Some Other Instances of Copula Deletion

There are a number of cases in which the copula can be said to be deleted. Most of these occur in environments quite different from that of COP DELETION in focus-emphatic sentences. These I shall list briefly in this section, since I cannot see any way at the moment in which they can be linked to the previous type of COP DELETION by a principled generalization. There is one case of COP DELETION which is very similar to that in focus-emphatic sentences, however, which I shall describe in more detail in the following section.

- (a) The copula may be deleted in simple copular sentences where the subject NP is one specified as to its personal reference, sometimes requiring a proper name as its predicate NP. e.g. suunaa - "name", garii - "town" linked with an NP representing an individual e.g.

(54) suunaanaa Muusa 15
my name Musa

- (b) Where a copular S with no subject NP is embedded in an S of the form ya ke (ta ke, su ke), which has been discussed in Chapter 7, footnote 9, the copula may be optionally deleted e.g.

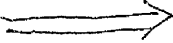
15. Some speakers are able to invert this sentence for emphasis without adding Cop i.e.,

- (L) Muusa suunaanaa
Musa is my name

Focus-raising would accommodate this by saying that the deletion of the copula applies optionally after PREDICATE EMPHASIS to NP Cop where NP has certain features, in such a dialect, and in dialects where (E) is ungrammatical, it applies optionally before PREDICATE EMPHASIS, rendering the latter inapplicable since it mentions Cop in its structural description.

- (55) wanda ya ke matsiyacii nee baa daamar zuwaa nan
 he who it is poor man be there is no chance of coming here
 i.e. one who is poor has no chance of coming here
- (56) wanda ya ke matsiyacii baa daamar zuwaa nan = (55)

The same is true of other verbs which allow either EXTRAPOSITION or RAISING-TO-SUBJECT to apply to their embedded complements (in the terms of the footnote cited); generally these verbs have copular meanings. Where RAISING applies, the copula may be deleted optionally in the embedded S, and the raising of the subject NP guarantees that only the predicate NP remains in the sentence. (57) is the deep structure form, which is ungrammatical at surface structure in this case.

- (57) (*) Kande matsiyaciya cee yaa zama ~~da~~ RAISING-TO-SUBJECT
 that K. is a poor woman has come about 
- (58) Kande taa zama ~~da~~ matsiyaciya cee
 K. has come to be a poor woman
- (59) Kande taa zamana matsiyaciya = (58)

naa of naa da "to have" also appears to be deleted in such sentences. Incidentally this might support the analysis of naa as a form of the copula.

- (60) (*) Kande tanaa da kudii yaa zama ~~da~~
 K. has money has come about
- (61) Kande taa zama ~~da~~ tanaa da kudii
 K. has come to have money
- (62) Kande taa zama ~~da~~ da kudii

e.g.

- (66) daariyaa (cee) su kee yii, baa kuukaa ba nee
it is laughing they are doing, it is not crying.
- (67) daariyaa (cee) su kee yii, baa kuukaa ba
it is laughing they are doing, not crying.

Since the copula is deleted here in a position where it cannot be deleted where there is no negation, the rule of COPULA DELETION in negative contexts should be considered as separate from COPULA DELETION in focus-emphatic S. This NEGATIVE COP DELETION rule will probably apply at least to both S-focus and focus-emphatic S.

8.10 Copula Deletion with Adverbial Nouns of Compulsion

The adverbial nouns of compulsion are doole, lalle (or lallai) and tiilas. These three have approximately the same meaning but each has three distinct meanings depending on the type of construction in which they are used. The first is a purely adverbial use, and the meaning corresponding to this is that the action described by the sentence is performed by the actor (invariably the subject of the sentence) under external compulsion, whether physical or moral ("by force" in Nigerian English). This use can be distinguished from the others by the fact that these words, like most other adverbs, can be placed either to the left- or right-hand side of the S. e.g.

- | | | | |
|------|-------------------------------|-------------------------------|--|
| (68) | { doole
lallai
tiilas } | su naa cin ciyaaawaa | } because they have
no choice (doole
etc) they are
eating grass |
| (69) | su naa cindyaawaa | { doole
lallai
tiilas } | |

In the other two cases the adverbial noun occurs on the left-hand side of S only when it is not followed by nee. The copula

nee follows obligatorily where doole etc. is the right-hand element but optionally where it is the left-hand element. The two cases are distinguished by the nature of the remainder of the sentence : in (70) - (72), the sentence has a general indicative tense system, and from the optional presence of a ceewaa complementizer the remainder of the sentence can be recognized as an embedded complement S.

- (70) $\left\{ \begin{array}{l} \text{doole} \\ \text{lallai} \\ \text{tiilas} \end{array} \right\} (\text{nee}) (\text{ceewaa}) \text{ zaa su tafi wajen suunaa}$ $\left. \begin{array}{l} \text{it's certain} \\ \text{they will go} \\ \text{to the naming} \\ \text{ceremony} \end{array} \right\}$
- (71) $(\text{ceewaa}) \text{ zaa su tafi wajen suunaa}$ $\left\{ \begin{array}{l} \text{doole} \\ \text{lallai} \\ \text{tiilas} \end{array} \right\} \text{nee}$ $\left. \begin{array}{l} \text{it's certain} \\ \text{they will go} \\ \text{to the naming} \\ \text{ceremony} \end{array} \right\}$
- (72) $*(\text{ceewaa}) \text{ zaa su tafi wajen suunaa}$ $\left\{ \begin{array}{l} \text{doole} \\ \text{lallai} \\ \text{tiilas} \end{array} \right\}$

The meaning of doole, lallai and tiilas with or without nee in such a context is "certainly; it is an incontrovertible fact that": the compulsion is, as it were, that of the situation compelling the speaker to give utterance to the facts.

In the second case as in (73)-(75) the sentence is subjunctive, again, I would argue, an embedded subjunctive complement.

- (73) $\left\{ \begin{array}{l} \text{doole} \\ \text{lallai} \\ \text{tiilas} \end{array} \right\} (\text{nee}) \text{ su tafi wajen suunaa}$ $\left. \begin{array}{l} \text{they must/are obliged} \\ \text{to etc. go to the} \\ \text{naming ceremony} \end{array} \right\}$
- (74) $\text{su tafi wajen suunaa}$ $\left\{ \begin{array}{l} \text{doole} \\ \text{lallai} \\ \text{tiilas} \end{array} \right\} \text{nee}$ $\left. \begin{array}{l} \text{they must/are obliged} \\ \text{to etc. go to the} \\ \text{naming ceremony} \end{array} \right\}$
- (75) $*\text{su tafi wajen suunaa}$ $\left\{ \begin{array}{l} \text{doole} \\ \text{lallai} \\ \text{tiilas} \end{array} \right\}$

The force of doole etc. here is to state that it is compulsory, imperative etc. to accomplish the unrealized action expressed in the subjunctive clause. (72) and (75) are ungrammatical (because the copula is missing)

only for the gloss given; if doole etc are interpreted adverbially, (72) without ceewaa can mean "they will be forced to go to the naming ceremony", and (75) "let them be forced to go to the naming ceremony."

The structure of (71) and (74) is clearly

NP [S]_{NP} - NP (doole etc) - Cop i.e. a copula sentence with a complement S as subject. The version of (70) and (73) with nee can then be derived by COMPLEMENT EXTRAPOSITION from this deep structure producing NP (doole etc.) - Cop - S, in exactly the same way as ceewaa - complements are extraposed across predicates like gaskiyaa nee - "is true", and subjunctive complements across such as waaajibii nee - "is an obligation", (cf. Chapter 5, Section 1). The correctness of this view is confirmed by the fact that like gaskiyaa, doole, lallai and tiilas, although they take feminine agreement when used as subject NP's (ta) or focus NP's (cee) as in (76), take masculine agreement when followed by an extraposed clause. This is because COP AGREEMENT takes place before EXTRAPOSITION, and is therefore with the subject NP.

(76) { doole
 lallai
 tiilas } cee ta saa suka ci ciyaawaa

it was necessity which made them eat grass

The version of (70) and (73) without nee clearly must be related to the other two stages in the derivation described here.

COPULA DELETION is especially appropriate in this case, since as in focus-emphatic sentences, the deletion transformation may only apply to structures on which EXTRAPOSITION has already operated.

CHAPTER 9CONCLUSION9.1 The Case for Focus-Placement

A large number of conclusions have been reached in this thesis about particular rules of Hausa grammar, and their mutual ordering relations. For this information I refer the reader to the Appendices, especially to Appendix II in which the transformational rules are listed, together with references to the points at which they are discussed in the text. In this chapter however I wish to address myself to two related questions, which are the central concern of this thesis: (i) what is the correct derivation for focus-emphatic sentences in Hausa? and (ii) what is the role of semantic interpretation in the grammar of Hausa? The answer to the first question provides some clues as to how the second might be answered for Hausa, and possibly for other languages too.

This thesis began with the premise that it would be desirable to relate focus-emphatic sentences in languages like Hausa to cleft sentences in languages like English, mainly because they share the same thematic structure, which was described in terms of focus and presupposition, and secondarily because there are some similarities between the syntax of the two types of sentences. The first step taken in trying to establish this relation was to examine the idea that focus-emphatic sentences could be derived from pseudo-cleft deep structures. Such structures seemed likely candidates, as they appeared to convey the same thematic structure as both clefts and focus-emphatics. The semantic interpretation could therefore be read off the pseudo-cleft deep structure, and the subsequent

deformation of the structure through CLEFT EXTRAPOSITION and the deletion of the relative marker and Copula would not affect the meaning.

But in examining the proposed pseudo-cleft deep structure and its associated derivation in the light of its interaction with other transformational rules it was found wanting. In Part II the following syntactic facts were presented (a) where the focus NP is equated with a subject in the clause, the Auxiliary, and reflexive and other pronouns agree with the focus NP in person, not with a third person subject relative clause, as one would expect from the pseudo-cleft structure. (Chapter 3, Sections 1-6). (b) feminine verbal-nouns acting as foci are not followed by the feminine copula cee like other feminine focus NP's, but by the masculine unmarked form nee. In the pseudo-cleft analysis, all NP foci would be underlying predicate NP's and would presumably take the same type of agreement. (Chapter 3, Sections 7 - 10). (c) relative clauses may be extraposed from the focus in focus-emphatic sentences only where extraposition from the element with which the focus is equated in the corresponding non-emphatic S would not cause the relative clause to cross VP or NP e.g. extraposition across the clause is possible from a focus equated with a direct object, but not from a focus equated with a subject or indirect object. Since all foci have the deep function of predicate NP's in the pseudo-cleft deep structure, such restrictions cannot be naturally stated (Chapter 4) (d) backward pronominalization or reflexivization of an NP in the focus by an NP in the clause is only possible where the pronoun would follow the full NP in the corresponding non-emphatic sentence e.g. where the pronoun is within a focus equated with the object and the full NP is the subject of the same S. Again

since the focus is defined as a deep predicate NP only in the pseudo-cleft analysis, such a generalization cannot be captured by this approach.

Taken together, these four points amount to a strong case against a pseudo-cleft deep structure and for a focus-placement analysis, i.e. either focus-raising or focus-fronting. In such an analysis, the corresponding non-emphatic sentence forms part of the deep structure of focus-emphatic sentences, thus solving the problems outlined above.

AUX AGREEMENT (and possibly also reflexive and pronoun agreement rules), RELATIVE CLAUSE EXTRAPOSITION, PRONOMINALIZATION and REFLEXIVIZATION precede the emphatic movement rule; in the case of FOCUS-FRONTING, by ordering within the cycle, and in the case of FOCUS-RAISING, by virtue of the fact that the former rules operate on the lower S cycle, FOCUS-RAISING on the higher S cycle. As for the gender of the Copula, focus-fronting would probably explain it by ordering COP AGREEMENT before the rule which somehow creates the verbal noun; focus-raising analyzes the anomalous gender as arising from the fact that the pronoun which replaces a raised verbal element is [-FEM] and it is this which determines the gender of the subject NP and therefore of the Copula following RELATIVE FORMATION.

9.2. Semantic Interpretation in the Focus-Raising and Focus-Fronting Analyses.

The focus-placement analyses also have the advantage of defining grammatical relations, and therefore grammatical functions of the focus, such as S^1 , direct object, S_2 subject etc. since the non-emphatic sentence containing the focus in a position generated by the

base rules is present in the deep structure. The semantic interpretation rules can read off the relations from such a structure directly, whereas in the pseudo-cleft structures these rules would have to match a pronoun in the subject relative clause to the focus. However, the specification of the meaning focus/presupposition and more especially of which constituent is the focus and which the presupposition is not present in the non-emphatic sentence. To remedy this, either an abstract marker (emph or F) could be attached to the constituent which is to become the focus at deep level, or some semantic interpretation rules dealing with such things as thematic relations could be allowed to operate at some level other than deep structure. The first of these suggestions has been discussed and rejected in Chapters 1 and 2, since it cannot handle the fact that only one focus is formed in any one sentence without destroying the position it was established to protect i.e. that deep structure is the sole input of the semantic component.

Taking up the second of these suggestions, the next question is: at which level or levels other than deep structure should the interpretive rules apply? For focus-raising, the intermediate pseudo-cleft structure is the level which provides the fullest specification of the meaning in terms of its structure: a copular sentence with a headless subject clause containing a $\begin{bmatrix} -\text{SPEC} \\ +\text{WH} \end{bmatrix}$ element, the copula and a predicate NP. If my analysis of such clauses is correct, this type of relative structure itself provides the interpretation variable, to which the focus gives a value: hence the sentence is automatically equational. Apart from the cases discussed in Chapter 1, where the syntactic and semantic focus is not the same and which do require a further rule (see below in this Section), I do not think any additional apparatus is needed to handle focus and presupposition. For focus-

fronting, on the other hand, the only other level available is that of surface structure, after the rule FOCUS-FRONTING has applied. Focus-fronting would need a more complicated surface interpretive rule which would map the element filling the position to the left of the subject on to either the predicate in a structure like the kind of pseudo-cleft discussed above, or the focus in some other representation of focus/presupposition structure.

Given this kind of semantic interpretation rule in the focus-fronting approach, nee/cee must be regarded as an optional element which adds nothing to the meaning in focus-emphatic sentences. It is thus divorced from nee/cee the copula, whereas in the focus-raising approach with intermediate structure interpretation, the two are identified as equational predicators. Also the claim that nee/cee contributes nothing to meaning in focus-fronting would entail the claim that sentence-focus i.e. S'nee and simple S' are synonymous, which, as we know, they are not. Further it has been shown in Chapter 8 that the meaning of KOO-words can be simply predicted on the basis of recognizing that focus-emphatic sentences are copular sentences in underlying structure: focus-fronting would have to construct two separate rules to account for this. More puzzling is the evidence about the idiomatic meaning of baa wani abu ba nee, which also occurs in focus emphatic sentences beginning baa wani abuba: this shows that possibly apart from simple assignment of focus some other aspects of semantic interpretation are taken care of at intermediate structure.

In order further to elaborate the role of the semantic component as defined by focus raising, it is necessary to ask in what

sense the intermediate (pseudo-cleft) structure constitutes a systematic level in syntax. This question cannot unfortunately be answered in this thesis. If it is a level, it does not seem to be connected with the transformational cycle, since FOCUS-RAISING and RELATIVIZATION operate before this level and CLEFT EXTRAPOSITION after it on the same cycle, and the latter is a cyclic rule (see Chapter 8, Section 1). I can only tentatively suggest that it may be linked to the completion of the block of structure-preserving rules, or what amounts to the same thing in the theory used here, to the point of deletion of Δ . The set of structure-preserving rules would necessarily not be the same as that of Emonds, since EXTRAPOSITION as I have formulated it would not be among them¹, but this would not affect this conception since EXTRAPOSITION does not change meaning. PASSIVE in English can be formulated as a structure-preserving rule and can change meaning, especially where quantifiers are involved; similarly RAISING-TO-SUBJECT in Hausa is structure-preserving and the structure it creates must be subject to semantic interpretation after it has applied, since a range of different elements in the embedded

1. Emonds eliminates COMPLEMENT EXTRAPOSITION entirely; instead the base rules generate an S on the right-hand side of VP. CLEFT EXTRAPOSITION on the other hand is retained, and is considered a structure-preserving rule just because of this right-hand S. There is a danger of circularity in this kind of argument, that surface structures will be analyzed as direct reflections of deep structures to uphold the structure-preserving principle, then parallel surface structures will be said to confirm the principle. I prefer to see the connection as some property shared by EXTRAPOSITION transformations.

In the view proposed here IT-INSERTION in English although it does not change meaning fills Δ and is therefore structure-preserving. But presumably it follows EXTRAPOSITION which according to the analysis presented in this thesis does not preserve structure. This is then counter-evidence to the hypothesis that structure-preserving (dummy-filling) transformations constitute a unitary block uninterrupted by other rules.

S may be chosen to be raised under certain circumstances.

One drawback of focus-raising is that it cannot make a generalization to cover emphatic copular sentences of the form NP- Cop - NP, but uses instead a different transformation PREDICATE EMPHASIS to derive them, which is not formally related to focus-raising. Focus-fronting however claims to cover this as well as verbal focus-emphasis (with and without nee/cee) and S-focus by the same rule. There are good syntactic reasons to keep copular and verbal emphasis distinct, concerning COPULA AGREEMENT (Chapter 3, Section 10), PRONOMINALIZATION (Chapter 5, Sections 9 and 10) and the ability of PREDICATE EMPHASIS, but not CLEFT EXTRAPOSITION to apply to "descriptive" copular S (Chapter 6, Section 6). Focus-fronting fails to account for these facts. However, from a semantic point of view emphatic copular sentences share the focus-presupposition structure of other emphatic S, and in this case the interpretation rule must operate at surface structure to relate this simple sentence to a sententially complex semantic structure. The problem is not as great as it may seem, however, as in this case there is no choice about the focus: it is always the predicate NP. In other words the assignment of focus can be made at deep structure².

2. This would require some focus-emphasis marker at deep structure, which is an unsatisfactory solution. The alternative is to derive (A) from (B)

(A) sarkii nee Audu
king be Audu

(B) $_S [_S \text{Audu sarkii nee}]_S \Delta \text{nee}]_S$

by FOCUS-RAISING, COP-DELETION of the embedded S nee and PREDICATE EMPHASIS. This would be an anomalous type of FOCUS-RAISING derivation however which would be a costly addition to the grammar.

There remains the problem of the extension of focus interpretation to the node immediately dominating the syntactic focus raised in Chapter 1. The difficulty is of course, that the notion of "node immediately dominating X" is defined on deep structure e.g. S for subject NP and VP, VP for object NP etc. whereas the focus interpretive rule in focus raising operates at intermediate structure. In the absence of any other explanation, this must be taken as a counter-example to the view of semantic interpretation taken here.

9.3. An Assessment of Focus-Raising and Focus-Fronting.

Much of the evidence for focus-raising, although it is quite persuasive, crucially involves considerations of semantics. The purely syntactic evidence^{in Part III} is rather slight, consisting mainly of the fact that forward pronominalization from subject foci is ungrammatical, which seems to result from a cross-over constraint, and the fact that pronouns anaphoric to the focus in the clause are not reflexive, indicating that the focus and its copy are in different S. (Chapter 6, Sections 2 and 3) But in addition, focus-fronting must be extended to cover fronting in relative clauses if it is to offer an explanation of the relative features of focus-emphatic clauses equivalent to that of focus-raising. One can argue against this on syntactic grounds, that the conditions on Pied Piping are not identical for the two rules (Chapter 7, Section 16) and on semantic grounds that relative clauses do not seem to have a focus-presupposition structure like that of focus-emphatic clauses. Neither of these objections is overwhelming, however. Also focus-fronting does give attractive explanations of the prohibition on the occurrence of emphatic nee/cee or sentence-

emphatic nee with copular and subjunctive S (Chapter 8, Section 4) and of the ungrammaticality of two negations in a focus-emphatic sentence (Chapter 8, fn. 11) on the basis that focus-emphatic S are simple S i.e. the focus is dominated by the same S as the clause.

If these observations are correct, there would seem to be some reason to attempt to combine the best features of focus-raising and focus-fronting in a single derivation. This means essentially that a complex focus-emphatic S should be derived from a simple deep S or a simple focus-emphatic structure should be derived from a complex deep S. The former is ruled out by the prohibition on structure building; the second is the type of operation usually carried out by the pruning of S-nodes. But given phrase-structure rules of the type used in focus-raising, the S dominating the clause cannot be pruned where the subject remains in the clause as in (1), since the S-node still branches.

- (1) $S \left[VP \left[\text{Audu nee} \right] VP \right] S \left[NP \left[\text{Musa} \right] NP \right] VP \left[\text{ya gani} \right] VP \right] S$
 Audu be Musa saw

What has been deleted in such a structure is the Complementizer (Comp) to the left of the clause. It has been noted (Perlmutter 1972) that in English WH-FRONTING in relative clauses and questions may apply to raise subject from embedded complement S only where the complementizer that is deleted, not when it is present, e.g.

- (2) who do you believe (*that) came yesterday

- (3) the man who you believe (*that) came yesterday

In some dialects of English, e.g. my own, this restriction is extended to all WH-fronting over that

- (4) who do you believe (*that) Harry saw?
 (5) the man you believe (*that) Harry saw

This could be explained by some type of pruning operating on condition that Comp is absent: but this would require that the rest of the sentence apart from Comp is all dominated by one node X, so that when Comp is deleted the node which originally dominated Comp + X, which I assume to be S, exhaustively dominates this node and so is deleted³. If a similar process takes place in Hausa, it could be said that that focus-emphatic S become simple S by pruning following COMP-DELETION. The above restrictions on Cop and Neg could then be stated as surface structure or shallow structure or global constraints on the form of simple sentences, possibly themselves determined by the possible form of S as generated in the base.

Whether or not this is the case, it still does not explain why the restrictions on the modal properties of focus-emphatic and S-focus sentences are the same as those on relative clauses. For this reason the explanation offered by focus-raising, that they are due to constraints on the properties of S in the configuration

3. Such an analysis is proposed by Bresnan (1970), but both X and the node dominating Comp + X are types of S (S and S' respectively). Applying this to Hausa, then, COMP-DELETION would not cause S-pruning but S' - pruning. To allow S-pruning to be caused by loss of Comp alone would make many strings which appear to be sentences non-sentences, even if the convention were restricted so as not to apply to the highest S. This attempt at a compromise between the two analyses seems doomed to failure for these reasons.

NP [NP S] NP , while it is not of particular theoretical interest as it stands, must be preferred to focus-fronting or any alteration of focus-raising in the direction of focus-fronting, since it is of greater generality. On the whole then focus raising is the more fruitful of the two types of focus-placement considered, both in easing the burden on the semantic component by providing the structures closest to what I conceive to be the semantic representation of focus, and in providing the optional grammar for the generation of focus-emphatic sentences in Hausa. The adoption of focus-raising means that in all probability the derivation of cleft sentences in English and focus-emphatic sentences in Hausa is essentially the same, differing only in the base rules and morphological rules, and in the fact that IT-INSERTION is a rule of English, not Hausa, grammar, and the fact that RELATIVE COMP-DELETION has different conditions in English and Hausa.

APPENDIX 1.

PHRASE STRUCTURE RULES.

The rules presented here and in Appendix II are those necessary for the focus-raising derivation. For the types of rules used in alternative derivations, see Chapter 2. * The more tentative suggestions made in the thesis such as the derivation of negation and complementizers from higher sentences are not incorporated into these rules. On the other hand, some attempt is made here to regularize the use of features which are referred to in the course of the thesis in a rather loose way for convenience of exposition. These rules are not intended to be exhaustive.

$$(1) S \rightarrow \# \left\{ \begin{array}{l} \text{Comp} \left\{ \begin{array}{l} \text{koo} \\ \text{da} \end{array} \right\} S \left\{ \begin{array}{l} \text{koo} \\ \text{da} \end{array} \right\} S \\ (\text{neg}) (\text{mod}) (\text{grad}) NP VP PP PP \end{array} \right\} \#$$

$$(2) VP \rightarrow \left\{ \begin{array}{l} \text{AUX} \quad V \quad NP \quad NP \\ NP \quad \text{Cop} \\ \text{Ex} \quad NP \end{array} \right\} PP \quad PP$$

$$(3) NP \rightarrow \left\{ \begin{array}{l} NP \quad S \left\{ \begin{array}{l} \text{koo} \\ \text{da} \end{array} \right\} NP \left\{ \begin{array}{l} \text{koo} \\ \text{da} \end{array} \right\} NP \\ Det \quad N \quad Quant \quad S \end{array} \right\}$$

$$(4) PP \rightarrow P \quad N \quad NP$$

$$(5) N \rightarrow \Delta$$

$$(6) P \rightarrow \Delta$$

$$(7) \text{Comp} \rightarrow \Delta$$

$$(8) \text{Det} \rightarrow \Delta$$

$$(9) \text{AUX} \rightarrow \Delta$$

$$(10) V \rightarrow \Delta$$

(Abbreviations: S=Sentence; Comp= Complementizer; neg= negative marker,

mod = modal particle; grad = gradational particle; NP = Noun Phrase;
 VP = Verb Phrase; PP = Prepositional Phrase; AUX = Auxiliary;
 V = Verb; Cop = Copula; Ex = Existential; Det = Determiner;
 Quant = Quantifier; \longrightarrow = rewrite as; } } = a disjunction)

In these rules I have eliminated as far as possible the device of optionality usually represented by brackets. Instead, the lexical insertion rules are allowed to operate obligatorily or optionally depending upon the category and function of the dummy (Δ) (determined by the frame in which it occurs) which they are replacing. Any Δ which has not been filled at a certain stage of the derivation will be deleted. A lexical insertion rule applies after each rule of (5)-(10), which introduce the terminal dummy symbols, inserting a lexical item which matches the frame of the relevant Δ in its selectional features. The order of these rules is extremely important, as it specifies which categories determine the selectional restrictions on which other categories e.g. the features on N and Comp determine the selection of V. Pending further investigation, I cannot be sure whether the ordering shown is correct.¹

In what follows the above rules will be discussed briefly together with relevant fragments of the lexicon, ^{and} finally some sentences which are not accounted for by the above rules are explained.

1. It will be noted that this conception of the categorial component differs from that of Chomsky (1965). As far as I can judge, however, the differences are matters of detail and do not undermine the idea of deep structure itself.

Rule (1) generates conjoined and disjoined sentences (da S da S) and (Koo S Koo S) respectively, but da is obligatorily deleted. It also generates the structure NP VP together with the optional particles, which are listed below in (11) and (12) and negation, which produces the forms bàa ...ba, báà, báa, and báabu by various transformations (e.g. NEG DISTRIBUTION).

(11) mod → $\left. \begin{array}{l} \text{máa} \\ \text{kuma} \\ \text{kuwa} \\ \text{dai} \\ \text{fa} \\ \text{kam} \end{array} \right\}$

(12) grad → $\left\{ \begin{array}{l} \text{sai} \\ \text{har} \\ \text{koo} \end{array} \right\} \quad \begin{array}{l} \text{"only"} \\ \text{"even"} \\ \text{"even"} \end{array} \quad (\text{See Chapter 1, Section 5})^2$

More than one modal particle can occur in a sentence: this is not accounted for in these rules. They are subject to ^amovement rule: with few constraints: they may be inserted between any constituents e.g. within NP (see Galadanci 1969) or between AUX and V, but their usual position is following a topic or sentence-final, only kuma may be sentence-initial. On the other hand, only one gradational particle may occur in each S, as far as I know, either dominated by S or attached to another constituent by transformation.

2. Rules of the form (11) and (12) are used for convenience and would probably not be part of the type of grammar proposed here. Instead the rules generating terminal dummies (5)-(10) would be extended to include neg, mod, grad, Cop and Ex. In the case of neg, Cop and Ex the single features [+neg], [+cop] and [+ex] would select their unique realizations in the lexicon, although these features would be used in combination with others for other lexical items. For mod and grad, the items in (11) and (12) could be further broken down into component features.

Comp includes ceewaa which is present in embedded statements, but obligatorily deleted where it occurs in the highest S; wai which expresses doubt on the part of the speaker and cannot be deleted; and koo introducing questions which may be deleted under the conditions described in Chapter 6, Section 5. As well as this, Comp may contain the feature [+ NP], which by the convention introduced by Chomsky (1970), produces a node NP dominated by Comp. Where this node is in the frame $NP [Det \ N \ _\ NP \ VP]_{NP}$, i.e. a complement structure it is filled by V (X) by NOMINALIZATION (q.v.) and produces a nominalized sentence. Where it is in the frame $NP [NP \ _\ NP \ VP]_{NP}$ i.e. a relative clause structure, it is filled by a [+WH]NP by RELATIVE FORMATION producing the relative pronoun + da. Possibly where such a [+ NP] Comp is in the highest sentence it provides the node which can be filled by DISLOCATION, but this is unlikely as DISLOCATION seems to apply more than once to a simple S e.g.

- (13) mutaanen nan nii mas naa san su
 those people I even I know them

These different types of Comp are disjoint: this predicts that only one of them can appear in each S. Although I have not studied this, it seems to be the case e.g.

- (14) *wanda $\left\{ \begin{array}{l} \text{ceewaa} \\ \text{wai} \\ \text{koo} \end{array} \right\}$ na gani
 the one who $\left\{ \begin{array}{l} \text{that} \\ \text{allegedly} \\ \text{whether} \end{array} \right\}$ I saw

- (15) *zuwan $\left\{ \begin{array}{l} \text{ceewaa} \\ \text{wai} \\ \text{koo} \end{array} \right\}$ Audu
 Coming $\left\{ \begin{array}{l} \\ \text{"} \end{array} \right\}$ of Audu

- (16) *zuwan $\left\{ \begin{array}{l} \text{ceewaa} \\ \text{wai} \\ \text{koo} \end{array} \right\}$ da Audu ya yii
 coming $\left\{ \begin{array}{l} \text{"} \end{array} \right\}$ that Audu did
- (17) *ban gayaa musu $\left\{ \begin{array}{l} \text{koo ceewaa} \\ \text{ceewaa wai} \\ \text{wai koo} \\ \text{etc} \end{array} \right\}$ Audu yaa zoo ba
 I did not tell them $\left\{ \begin{array}{l} \text{whether that} \\ \text{that allegedly} \\ \text{allegedly whether} \end{array} \right\}$ Audu came

The following lexical redundancy rules could be introduced to deal with Comp

- (18)
- $$\begin{array}{ll} [+ \text{COMP}] & \longrightarrow \left[\begin{array}{l} + \\ - \end{array} \text{NP} \right] \\ [- \text{NP}] & \longrightarrow \left[\begin{array}{l} + \\ - \end{array} \text{WH} \right] \\ [- \text{WH}] & \longrightarrow \left[\begin{array}{l} + \\ - \end{array} \text{DOUBT} \right] \end{array}$$

The complementizers are represented in the matrix (19), in which those features which receive no value are marked minus by convention

(19)

	NP	WH	DOUBT
Nominalizations/Relatives	+	-	-
<u>koo</u>	-	+	-
<u>wai</u>	-	-	+
<u>ceewaa</u>	-	-	-

Only two PP's are shown dominated by S here: I have not investigated whether more are possible. Also it is assumed here that all Adverbs in Hausa can be analyzed as underlying PP's. PP's and Adverbs occurring to the left as in (20) are assumed to have been moved by a transformation which is probably a variety of DISLOCATION.

- (20) bana naa faara fassara littafin nan
 this year I began translating that book

Rule (2) generates verbal sentences. AUX is a tense and aspect marker: only the progressive naa/kee/ke and the future zaa could perhaps qualify as auxiliary verbs, but they are not analyzed as such in this thesis. AUX is combined with a pronominal element agreeing with the subject NP by the rule AUX AGREEMENT, producing the surface forms tabulated below in (21) by various morphological rules. As well as the six tenses, three of these tenses have special [+REL] forms which are used in the top S of relative and focus-emphatic clauses created by RELATIVE FORMATION, (see Chapter 7). The relative perfect is used also in other contexts to express a punctual occurrence. The relative future is obsolescent.

(27)

I sing. ^{II} sing. ^{II} sing. ^{III} sing. ^{III} sing. I plur. ^{II} plur. ^{III} impersonal
 masc. fem. masc. fem. (4th pers.)

SUBJUNCTIVE	n̄	kà	kí	yá	tá	mú	kú	sú	á
GENERAL PERFECT	n̄a	káa	kín	yáa	táa	mún	kún	sún	ón
RELATIVE PERFECT	n̄a	ká	kíkà	yá	tá	múka	kúka	súka	ákà
GENERAL PROGRESSIVE	n̄- n̄a	ká- n̄a	kí- n̄a	yá- n̄a	tá- n̄a	mú- n̄a	kú- n̄a	sú- n̄a	á- n̄a
RELATIVE PROGRESSIVE	n̄a- kò(o)	ká- kò(o)	kí- kò(o)	yá- kò(o)	tá- kò(o)	mú- kò(o)	kú- kò(o)	sú- kò(o)	á- kò(o)
HABITUAL (ITERATIVE)	n̄a- kàn	ká- kàn	kí- kàn	yá- kàn	tá- kàn	mú- kàn	kú- kàn	sú- kàn	á- kàn
FUTURE I	s̄n	s̄a- kà	s̄a- kí	s̄á	s̄a- tá	s̄a- mú	s̄a- kú	s̄a- sú	s̄a- á
General FUTURE II	n̄a	káa	kyáa	yáa	táa	máa	kwáa	sáa	áa
RELATIVE FUTURE	n̄a- kàa	ká- kàa	kí- kàa	yá- kàa	tá- kàa	mú- kàa	kú- kàa	sú- kàa	á- kàa

The progressive AUX is followed by a verbal noun, PP or S, not a simple verb. Where it precedes a verbal noun, the relative form has a long vowel, where PP or S, a short. ^{The rule producing} [This, unlike the VERBAL SUFFIXING rules applies before FOCUS-RAISING and RELATIVE FORMATION.

e.g.

(22) Kanoo mu ke
at Kano we are

(23) sayarwaa mu kee
selling we are

This indicates that the change of AUX in relative clauses actually applies before RELATIVE FORMATION proper, contrary to the supposition in Chapter 7. For further discussion of naa/kee/ke see below.

The aspectual features can be described using the following redundancy rules:

(24) $[+ \text{AUX}] \rightarrow \pm [\text{INDICATIVE}]$
 $[+ \text{INDICATIVE}] \rightarrow [+ \text{PERFECT}]$
 $[- \text{PERFECT}] \rightarrow [+ \text{FUTURE}]$

In addition the tenses can be cross-classified using a feature $[+ \text{DEFINITE}]$ which indicates that a definite point or definite points in time are referred to. This yields the matrix (25) which includes the relative perfect tense that is not syntactically determined.

(25)	INDIC	PERF	FUT	DEF
Subjunctive	-	-	-	-
General Perfect	+	+	-	-
Relative Perfect	+	+	-	+
Progressive	+	-	-	+
Habitual	+	-	-	-
Future I	+	-	+	+
Future II	+	-	+	-

The verb (V) can be classified as to whether it can be followed by an NP (transitive) like gyaaraa in (26) or none (intransitive) like zoo in (27). If transitive, both its NP's can be filled, like baa in (28), or it may be marked with the rule-feature [+WA INSERTION], in which case it adds wa/ma before the first object like gyaaraa in (29). It is quite difficult to determine which PP's belong within VP: it seems that those of destination (a NP in which a is obligatorily deleted by A-DELETION) and association (da + NP) seem to belong here. The class of a verb (motion or sociative) can thus be further determined by whether these PP's are filled: (30) shows the verb zoo which is an intransitive verb which combines both classes, since it is followed by PP PP. Some transitive verbs are transitive-motion or transitive-sociative (i.e. followed by NP a NP and NP da NP), as in (31) and (32).

- (26) Musa yaa gyaara keekee
 Musa repaired a bicycle

- (27) Musa yaa zoo
 Musa came

- (28) Muusa yaa baa Audu keekee
Musa gave Audu a bicycle
- (29) Muusa yaa gyaaraa wa Audu keekee
Musa repaired for Audu a bicycle
- (30) Muusa yaa zoo da Audu Kanoo
Musa came with (= brought) Audu to Kano
- (31) Muusa yaa raka Audu gidaa
Musa accompanied Audu home
- (32) Muusa yaa gauraya kookoo da furaa
Musa mixed koko with fura

Apart from these aspects of the subcategorization of the verb which are defined by features like those of (33),

- (33) [+ — NP]
[+ — NP NP]
[+ — PP]

etc

there are also selectional restrictions defined by the inherent features of subject and object NP's etc and by the features on Comp if these NP's contain an embedded S.

Verbs also appear in different grades. This is not the place to go into the details of this system, which is described in Parsons (1960). Grades 1-3 are primary, but 4-7 are derived, 4 and 7 by the addition of a semantic feature expressing thoroughness and motion towards the centre of the subject of discourse respectively. Grade 5 is similar to a passive form, but with an added feature of thoroughness or potentiality, and Grade 6 is a causative possibly to be derived by raising the verb from an embedded S and combining it with the verb saa - "cause" in the matrix S. What concerns us is the fact that the suffixes of the verbs differ not only between grades, but depending upon whether or not the verb is followed by an NP or not, whether wa/ma is attached and whether the NP is +[PRO], in which case the pronoun is attached to the verb by PRONOUN CLITICIZATION.

These forms which are listed below in (34) are produced by the VERBAL SUFFIXING transformations. The tone patterns, which are also very important, are ignored here.

(34)

	\emptyset	NP -PRO	NP +PRO	wa NP
Grade 1	-aa	-a	-aa	-aa
2	-aa	-i	-ee	-aa, -ar
3	-a	--	--	-aa, -ar
4	-ee	-ee	-ee	-ee
5	-oo	-oo	-oo	-oo
6	-u	--	--	--
7	-ar	-ar (da)	-ar da/ashee	-ar

The second line of the disjunction in Rule 2 generates the non-emphatic copular sentence. Unlike in verbal sentences, the subject NP position may be empty. Adjectives, which occur in predicate position, are taken to be a type of NP without determiners marked [+ADJ]. The morpheme nee or possibly naa is inserted as the realization of Cop, and is later changed to cee by the COPULA AGREEMENT rule where it agrees with a [+FEM]NP. naa could be the underlying form if the progressive tense (used with PP's, da + NP in possessive sentences and verbal nouns) is derived from the copula as discussed at the end of this Appendix. Also naa is the [-FEM] form of the Copula in Western dialects of Hausa.

The third line produces existential sentences, and here again the subject NP may be, in fact normally is, empty. The Ex

element may be dà or àkwáì, but may be both, i.e. dà àkwáì, particularly where the predicate NP is not present. àkwáì is marked [+PRONOUN CLITICIZATION] but dà is not. neg + Ex becomes báábù by a transformational rule, báábù is then optionally reduced to báà preceding an NP.

Rule 3. The top line is the recursive structure which produces conjoined NP's (da NP da NP) and disjoined NP's (koo NP koo NP...). The first da and koo are then optionally deleted by transformation. NP S is the deep structure source of relative clauses, while Det N S is that of complement S. In both cases what precedes S may be empty.

The structure Det N Quant is clearly inadequate as a structure for simple NP's, but it is not my task here to elaborate it further. Details of the internal structure of the Hausa NP are presented in Galadanci (1969). For one thing, the demonstrative modifiers (-n nan, -n can etc.) occur to the right of the head N as well as attached to an element wa - preceding N (wannan, wancan etc.) as in (35) and the referential (-n/-t \Rightarrow s \Rightarrow r) is always suffixed to the N. Under the present analysis these specifiers are treated as if they are moved by transformation rightwards from the left of N. On the other hand, adjectives which originate to the right in a relative clause are said to be moved leftwards and placed under Det by ADJECTIVE SHIFT as in (36) (the rule ADJECTIVE AGREEMENT having applied on the embedded S cycle). The node Quant comprises all the numerals, da yawa "a lot", kadan "few, little", duka "all" and possibly some others. duka may be frontshifted like adjectives, as in (37)

- (35) wannan riigaa \Rightarrow riigar nan
 this/that gown "

- (36) riigaa shuudiyaa \Rightarrow shuudiyar riigaa
 gown blue blue gown
- (37) riiguna duka \Rightarrow dukan riiguna
 gowns all all gowns

The part of the lexicon dealing with determiners might include redundancy rules like (38). The matrix (39) gives only a rough approximation to the feature composition of Det. Referential is used rather than definite as the distinction between wani/wata/wadansu and -n/-r is different from that between a and the in English. The former means "some" or "some other" i.e. not the same as one referred to, and the latter often refers more to some word mentioned in the discourse than something assumed to be defined outside the discourse. The feature $\begin{bmatrix} + \\ - \end{bmatrix} \text{SPEC}$ is used to distinguish non-specific and specific uses of wani/wata/wadansu and also the distinction between wane $\begin{bmatrix} -\text{SPEC} \\ + \text{WH} \end{bmatrix}$ "Wh-some" and koowane $\begin{bmatrix} +\text{SPEC} \\ + \text{WH} \end{bmatrix}$ "every, each" although it is extremely doubtful whether specificity is the correct criterion here. WH-NP's like waa "who?" and koowaa "everyone" are assumed to be derived from a $\begin{bmatrix} + \\ - \end{bmatrix} \text{SPEC}$ Det and an unspecified pro-N, whereas wànnée "which?" and kóowannée "each one (of them)" from Det $\begin{bmatrix} +\text{SPEC} \\ +\text{WH} \end{bmatrix}$ + a partially specified pro-N. I have assumed $[+\text{REF}] \rightarrow [+ \text{SPEC}]$ but I am not sure of this. A further cross-classifying feature is needed to distinguish between wànnān, and wànnàn etc as described by Galadanci (1969). As I am not aware of all the semantic implications of these distinctions, I have omitted this here.

- (38)
- | | | |
|---|---------------|---|
| $\begin{bmatrix} + \\ - \end{bmatrix} \text{DET}$ | \rightarrow | $\begin{bmatrix} + \\ - \end{bmatrix} \text{WH}$ |
| $\begin{bmatrix} + \\ - \end{bmatrix} \text{WH}$ | \rightarrow | $\begin{bmatrix} + \\ - \end{bmatrix} \text{REF}$ |
| $\begin{bmatrix} + \\ - \end{bmatrix} \text{REF}$ | \rightarrow | $\begin{bmatrix} + \\ - \end{bmatrix} \text{DEMONSTRATIVE}$ |
| $\begin{bmatrix} + \\ - \end{bmatrix} \text{DEM}$ | \rightarrow | $\begin{bmatrix} + \\ - \end{bmatrix} \text{FAR}$ |

on na/ta or ma, (originating perhaps through vowel harmony since in some cases the harmony is backward e.g. mini for mani, musu for masu). The -wa 1st sing. possessive form is anomalous, in being high-toned producing nàawáá - my one, and *gídeá wàwá > gídaánaa "my house". na is the 1st plural form which follows ma (presumably like mu < *nw)

(41)

	Masc.	Fem.	Plur.
I	nii		múu
II	káí	kée	kúu
III	shíi	ítá	súu

(42)

Masc	Fem	Plur.
ni	(wa)	mu (na)
ka	ki	ku
shi (sa)	si (sa)	su

Rule 4. generates Prepositional Phrases, both of the simple and complex type. The simple type consists of P NP where P is one of the set in (43)

(43)

P	→	$\left\{ \begin{array}{l} a \\ da \\ daga \\ ta \\ ga \end{array} \right\}$	"at" "with" "from" "through" "for"
---	---	---	--

Complex PP's have in addition a locative noun such as those listed in (44) with the short genitive link -n/-t (\Rightarrow r) added preceding the NP, producing PP's such as (45).

(44)

+ N	$\left\{ \begin{array}{l} ciki \\ báaya \\ tsaka \\ karkashi \\ etc \end{array} \right\}$	"inside"
[+ LOC]		"behind"
		"middle"
		"underneath"

- (45) a cikin gidaa; daga baayan tasha
 inside the house. from behind the station
 da tsakar dake ta karkashin kasaa
 in the middle of ~~the~~ through under the ground
 the night

PP's which contain Det N S are considered here to be the source of most adverbial subordinate clauses e.g. (46). Those temporal clauses which exhibit a relative form like (47) and (48) may be considered to be derived from $P_{NP} [NP S]_{NP}$ in which the head NP is empty or dominates a pronominal element which is later deleted, together with the temporal PP in the embedded S. In the case of (48), the sequence Preposition da + Relative Marker da is reduced to one da.

- (46) baayan sun zoo
 after they came.
- (47) baayan da suka zoo
 after they came
- (48) da suka zoo
 when they came.

The Progressive Auxiliary

A type of sentence which is not accounted for in these phrase-structure rules is that containing the AUX Pro + naa, of which the relative form is kee or ke depending upon what follows, as noted above. These sentences can be classified into four sub-types (a) verbal, in which naa/kee is followed by a verbal-noun as in (49); (b) prepositional, in which naa/ke is followed by a PP as in (50); (c) possessive, in which naa/ke is followed by da + NP as in (51), and (d) sentential, in which naa/ke is followed by an S.

- (49) Audu ya naa zuwa
 Audu is coming
- (50) Audu ya naa cikin gidaa
 Audu is in the house (where the P a has been deleted)
- (51) Audu yannaa da kudii
 Audu has money
- (52) Audu ya naa sarkii
 Audu is (has the position of) King

sarkii in (52) is considered as an underlying S, not simply an NP, since the ke form is used and there is an alternative synonymous form (53) in some dialects:

- (53) Audu ya naa sarkii nee

This indicates that (d) type sentences are derived like ya ke (ta ke, su ke etc.) in relative clauses, by RAISING-TO-SUBJECT and COP DELETION (see Chapter 7, Section 5).

It might be thought that (c)-type could be collapsed with (b), as da + NP appears to be PP. But there are sentences of the form NP da NP with a possessive meaning in which da is clearly Ex., not P, since akwai may be substituted for it.

- (54) riijiyar nan $\left\{ \begin{array}{l} \text{da} \\ \text{akwai} \end{array} \right\}$ zurfii

that well there is (= has) depth i.e. is deep.

The negative form of (54) is as one would expect (55)

- (55) riijiyar nan $\left\{ \begin{array}{l} \text{baabu} \\ \text{bāa} \end{array} \right\}$ zurfii

that well there is not depth i.e. is not deep.

Moreover, in many dialects the negative form of the AUX in (c)-type sentences is the same as neg + ex³

- (56) riijiyar nan bāa tā dà zurfii

that well has not depth.

If focus-emphasis is considered, a puzzling dichotomy appears in the behaviour of (c)-type. For sentences like (57), with a [- HUMAN] subject and a predicate NP expressing some quality of the object, da + NP may become the focus, as in (58)

- (57) riijiyar nan ta naa da zurfii
that well has depth

- (58) riijiyar nan, da zurfii (nee) ta ke 4
that well with depth (be) it is

But where the subject is [+ HUMAN], such dà + NP cannot become the focus; the only interpretation of (60) possible is associative

- (59) Muusa ya naa da shaanuu biyar
Musa has five cattle

- (60) Muusa da shaanuu biyar (nee) ya ke
 $\left\{ \begin{array}{l} \text{*five cattle (be) Musa has} \\ \text{? together with five cattle (be) Musa be} \end{array} \right\}$

However, another type of possessive sentence may be used with [+ HUMAN] subjects, of the form NP^i , $\text{NP } \underline{\text{garee}} \left\{ \begin{array}{l} \text{NP}^i \\ \text{[+PRO]} \end{array} \right\}$ e.g.

- (61) Muusa, shaanuu biyar garee shi

3. In some dialects dà is even omitted. In others, like Kano, on the other hand, the AUX forms are like those of (a) and (b), e.g. bāa tāa in (57).

4. Such sentences are much more acceptable if the subject is a dislocated topic.

garée is probably a pre-pronoun form of the Preposition ga

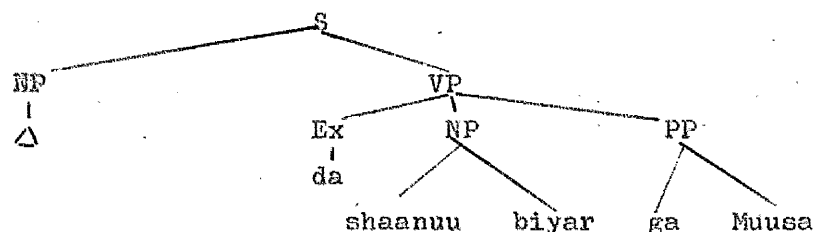
Now, for [- HUMAN] subjects only, there is a different type of focus-emphatic sentence like (62), which is even harder to explain:

- (62) riijiyar nan zurfii (nee) da ita
 that well depth (be) with it

Here da precedes the pronominal copy of the apparent subject, riijiyaa, not the predicate NP zurfii as one might expect.

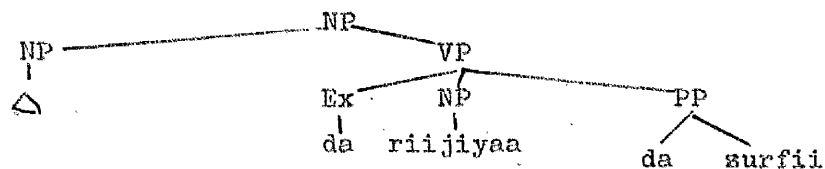
The only explanation I can give of these presumably related sentences is that despite their superficial similarity, there is a distinction in deep structure between those with [+ HUMAN] and [- HUMAN] subjects⁵. Disregarding naa for the moment, the deep structure of the former may be something like (63), and of the latter like (64)

(63)



lit: there are five cattle for Musa.

(64)



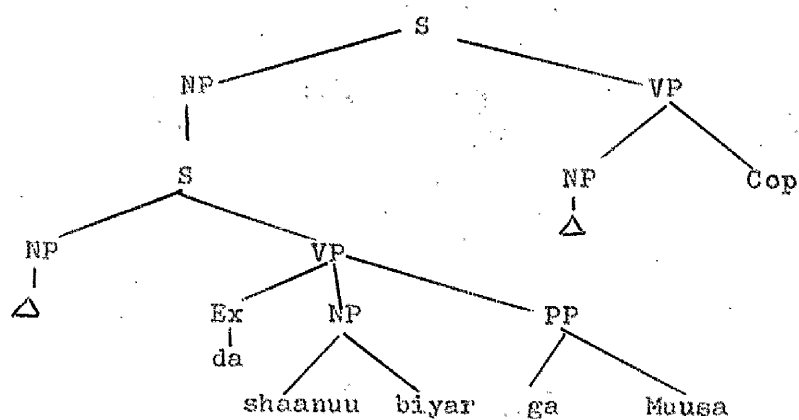
lit: there is well with depth.

5. Clearly if there is a distinction it is one of deep semantic significance not merely of syntactic selectional restrictions. This is only the first step in what could be a rewarding area of further research

(54) is then derived from (64) by filling the empty subject NP with the predicate NP riijiyaa, after which the sequence dà dà is reduced to dà (61) is derived in a similar way from (63). (62) would be derived by focus-raising of zurfi from (64), the P dà being lost in the process (cf. Chapter 7, Section 3b) leaving the Ex dà to the left of riijiyaa. In this framework, the reason why dà shaanuu biyar cannot become the focus in (60) is because it is not a constituent in (63), whereas da riijiyaa is a constituent (PP) in (64), and therefore (59) can be derived.

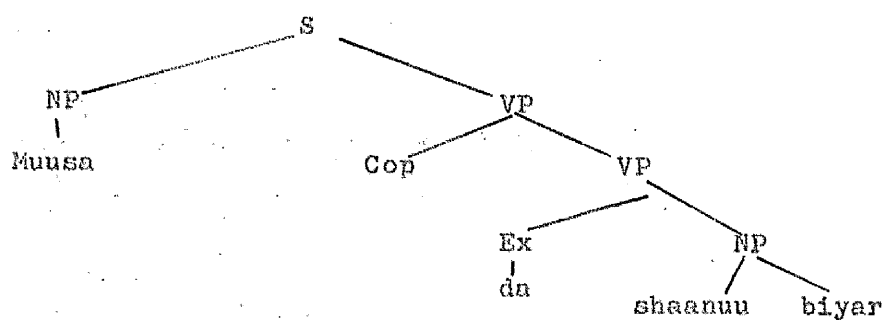
naa is not part of an existential S like (63) or (64). I would suggest therefore that the deep structure of (59) and (57) are the complex sentences (65) and (67) respectively. The predicate NP becomes the surface subject in (67) to yield (68), and the NP following ga the surface subject in (65) to yield (66) by RAISING-TO-SUBJECT. The derivation is thus parallel to the sentential type (d), except that in these possessive sentences, the absence of an embedded Subject causes pruning and the integration of the lower VP into the higher VP. Since Cop, (naa), is now in a post-subject position it acts like AUX and has Pro attached by AUX AGREEMENT.

(65)

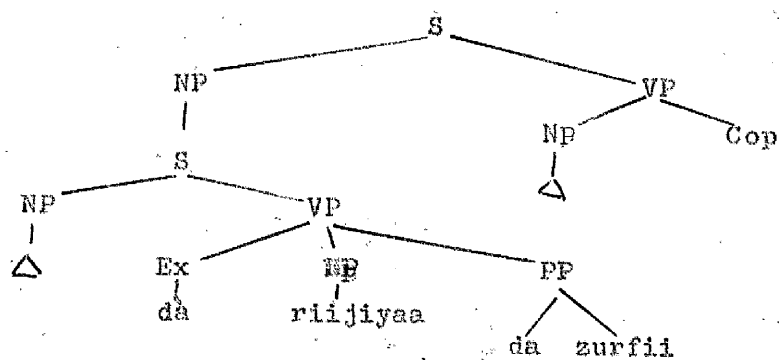


RAISING -TO-SUBJECT

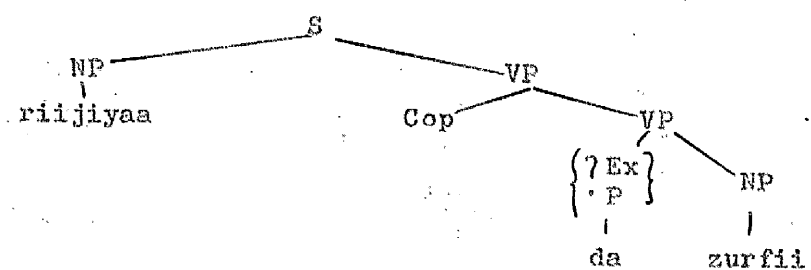
(66)



(67)

RAISING-TO_pSUBJECT

(68)



A similar derivation from a complex deep structure could be used to explain the nominal form of V following naa as in (49), since RAISING-TO-SUBJECT could be said to create $NP[V(X)]_{NP}$, which allows VERBAL-NOUN FORMATION to apply. As for (b)-type e.g. (50), these may be derived in a parallel way or from simple sentences like (69) which are ungrammatical at surface structure, by obligatory switching of PP and Cop (cf. Gregersen 1967), where an opposite process is suggested).

- (69) *Audu a cikin gidaa nee
Audu in the house be

APPENDIX IITRANSFORMATIONAL RULES

The following rules are listed in the order in which they are intended to apply, as far as this can be ascertained from the limited study made of them. Where ordering arguments are available, references are given. The phrase by the operation of the cycle means that the ordering which follows results from the rules involved applying on successive transformational cycles, whereas the ordering which follows otherwise is their intrinsic order within the cycle. The list is only a rough guide, since it is inadequate in the formalism used and in descriptive accuracy with regard to a number of the rules.

(1) REFLEXIVIZATION (obligatory, cyclic)

X	NP	Y	NP	Z
SD: 1	2	3	4	5
SC: 1	2	3	4	5
		[+PRO +REFL]		

Conditions i. 2=4

ii. 3 does not contain #

Notes = in i. indicates "coreferentiality".

Ordering: by the operation of the cycle precedes NOMINALIZATION (5.5), FOCUS2RAISING (5.8) and PRONOMINALIZATION.

(2) CONJUNCTION REDUCTION (optional, cyclic)

	NP	Aux	VP	NP	Aux	VP
SD:	1	2	3	4	5	6
SC:	1	2	${}_3[3$	\emptyset	5	$6]_3$

Conditions i. 1-3 and 4-6 command each other.

ii. 1 = 4

Notes Deletion of identical right-hand objects is not dealt with by this rule; this can be handled as a type of anaphoric deletion, which is not included in these rules. CONJUNCTION REDUCTION with causal catenatives is also omitted (see 7.8).

(3) RAISING-TO-SUBJECT (optional, cyclic)

	Comp X	NP	Y	Aux	V	Z
SD:	1	2	3	4	5	6
SC:	\emptyset	3	5	6	2	4

Conditions i. 6 is [+R-T-S]

ii. 6 commands 3

iii. 4 contains only one #

iv. 1 is $\begin{bmatrix} -NP \\ -NH \end{bmatrix}$

Notes This version of the rule operates on the base structure, not on the structure created by EXTRAPOSITION (see 7.4, fn. 9).

If its use is to be extended to account for *ya ke* etc. 5 and 6 in the SD could be replaced by a variable containing a [+R-T-S] element, or a [+COP] element, given the redundancy rule [+COP] \rightarrow [+R-T-S].

If an AUX-ADJUSTMENT rule were introduced, as suggested in 4.5, fn. 7, R-T-S could follow EXTRAPOSITION and AUX-AGREEMENT.

Ordering: precedes AUX-AGREEMENT.

(4) NEG-EX FORMATION (obligatory, cyclic)

neg NP $\left\{ \begin{array}{l} \text{Ex} \\ \text{Aux} \\ [-\text{FUT}] \\ [+DEF] \end{array} \right\}$

SD: 1 2 3

SC: \emptyset 2 ${}_3[\text{háabù}]_3$

Notes This rule indicates that there is a connection between the negative existential and the negative progressive tense, but not that the latter is derived from the former as suggested in Appendix I.

(5) NEG DISTRIBUTION (obligatory, cyclic)

neg NP Aux X #

SD: 1 2 3 4 5

SC: \emptyset 2 ${}_3[\text{bàa3}]_3$ 4 bá 5

Condition 1 - 5 dominated by the same S.

(6) NEGATIVE COPULA DELETION (obligatory)

I

NP # neg NP NP Cop

SD: 1 2 3 4 5 6

SC: 1 2 3 4 5 \emptyset

Condition 1 = 4

II (optional)

neg NP S Cop

SD: 1 2 3 4

SC: 1 2 3 \emptyset

Ordering: As stated here these rules precede FOCUS-RAISING

Notes I deals with deletion in relative clauses (8.9),
II with deletion in ^{focus-emphatics} ~~focus-emphatics~~ (8.9).

(7) WH-ATTACHMENT (obligatory, cyclic)

	NP	Comp	X	NP	Y
SD:	1	2	3	4	5
SC:	1	2	3	4 [+WH]	5

Condition 1 = 4

Notes The +WH attached to NP becomes a feature on Det.

Ordering: precedes RELATIVE FORMATION (7.2).

(8) FOCUS-RAISING (obligatory, cyclic)

	X	$\left\{ \begin{array}{c} \text{NP} \\ \text{PP} \\ \text{VP} \\ \text{V} \\ \text{S} \end{array} \right\}$	Y	Δ	Cop
SD:	1	2	3	4	5
SC:	1	2 [+PRO +SPEC +WH]	3	2	5

Notes On the raising of VP and V see 2.6, 2.9, 2.11, 3.9, 3.10, 5.4;
on PP see 3.8; S see 2.11; NP passim.

Ordering: by the operation of the cycle follows AUX-AGREEMENT (3.4),
REFLEXIVIZATION (3.5), (5.8), RELATIVE CLAUSE EXTRAPOSITION (4.7, 4.8)
PRONOMINALIZATION (5.6, 5.7), CONJUNCT MOVEMENT (4.5 fn. 7); otherwise
EXTRAPOSITION (6.2, 8.4) (see 6.2 and 7.1 passim) RELATIVE FORMATION (2.1,
Chapters 6 and 7 passim), PRONOMINALIZATION (6.3), COP AGREEMENT (3.10).

(9) KOO-WORD FORMATION (obligatory, last-cyclic)

baa X Det Y ba
 [-SPEC]
 [+WH]

SD: 1 2 3 4 5

SC: 1 2 ₃[koo 3]₃ 4 5

Condition Y does not contain Cop

Notes Other "Affective" contexts apart from negative are not accounted for.

Ordering: follows FOCUS-RAISING (8.7), precedes Right SHUFFLE (8.7)

(10) EQUI-NP DELETION (optional, cyclic)

I

	N	Comp [+NP]	NP	Aux	X	NP	Y
SD:	1	2	3	4	5	6	7
SC:	1	2	∅	4	5	6	7

Conditions i. 3 = 6
 ii. 6 commands 3
 iii. 1 and 2 are dominated by the same NP node

II

	X	NP	Y	N	Comp [+NP]	NP	Aux
SD:	1	2	3	4	5	6	7
SC:	1	2	3	4	5	∅	7

Conditions i. 2 = 6
 ii. 6 commands 2
 iii. 4 and 5 are dominated by the same NP node

Notes I is the "backward" and II the "forward" type; given a suitable convention they could be collapsed. The alternative of ordering this rule before NOMINALIZATION is chosen here (see 5.3, fn. 5)

Ordering by the operation of the cycle follows PRONOMINALIZATION; otherwise precedes PRONOMINALIZATION (5.3).

(11) NOMINALIZATION (obligatory, cyclic)

I

	Det	N	Comp	NP	{VP}	Y
			[+NP]		{V}	
SD:	1	2	3	4	5	6
SC:	1	2	3[5] ₃	4	∅	6

Condition 1,2 and 3 immediately dominated by the same NP node.

Notes II

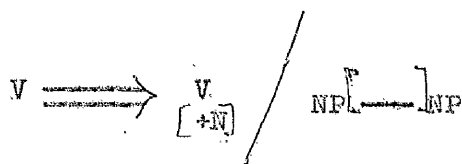
SD: as for I

SC:	1	2	3[5] ₃	4	5	6
-----	---	---	-------------------	---	---	---

Notes I is the "chopping" and II the "copying" type. As with FOCUS-RAISING, {VP} does not adequately cover the range of elements moved.
{V}

Ordering: by the operation of the cycle follows PRONOMINALIZATION (5.4), REFLEXIVIZATION (5.5); otherwise follows EQUI-NP DELETION (q.v.), precedes VERBAL NOUN FORMATION (3.9,3.10); RELATIVE DELETION (3.9,3.10).

(12) VERBAL NOUN FORMATION



Notes This is formulated differently from other transformational rules as it appears to be of a different kind; it may be an instance of a general convention which allows features of dominating nodes to be attached to dominated nodes, like that proposed for NP and Det in relation to WH-attachment. "Strong" VN's are drawn from the lexicon; "weak" VN's are simply subject to VERBAL SUFFIXING Rule VI.

(13) RELATIVE FORMATION (obligatory, cyclic)

	NP	Comp	NP	Aux	X	(P)	NP	Y
							[+NH]	
SD:	1	2	3	4	5	6	7	8
SC:	1	2[6 7] ₂	3	4	5	6	7	8
				[+REL]				

Notes This applies to all forms of relativization except 1, 2 and 3.

Notes This applies to all forms of relativization except that of top S subjects (see 5.2) which can be handled by a similar rule using only 1-4 in the SD, with 3 marked [+WH]

Ordering: precedes RELATIVE DELETION (7.2), follows FOCUS-RAISING (2.11, 5.10, 6.4)

(14) ADJECTIVE AGREEMENT (obligatory, cyclic)

N	NP [α FEM β PLUR]	NP [+ADJ]	Cop
SD:	1	2	3
SC:	1	2 [α FEM β PLUR]	3

Ordering: by the operation of the cycle precedes RELATIVE REDUCTION and RELATIVE DELETION, OTHERWISE PRECEDES PREDICATE EMPHASIS.

(15) RELATIVE REDUCTION

I (obligatory, cyclic)

	NP	Comp	NP [+WH]	NP	Cop
SD:	1	2	3	4	5
SC:	1	\emptyset	\emptyset	4	\emptyset

II (optional, cyclic)

	NP	Comp	NP	Pro	naa	da	NP [+WH]
SD:	1	2	3	4	5	6	7
SC:	1	\emptyset	na 3	\emptyset	\emptyset	\emptyset	\emptyset

III (optional, cyclic)

SD:	NP	Comp	NP [+WH]	Pro	naa	(da)	NP
	1	2	3	4	5	6	7
SC:	1	\emptyset	maa Pro	\emptyset	\emptyset	\emptyset	7

Notes I forms adjectives and appositives; II genitives; III

nguyhiformaaltdtpossessives (maa + Pro becomes mai (sing.) or Mansu (plur.) by later rules not included here. Of course the above are only

(16) ADJECTIVE SHIFT (optional)

	Det	N	NP [+ADJ]
SD:	1	2	3
SC:	1 [1 3 n] 2		

(17) RELATIVE DELETION (obligatory, cyclic)

	NP	X	NP
SD:	1	2	3
SC:	1	2	Ø

Conditions:

- i. 1 is dominated by Comp
- ii. 1 = 3
- iii. the path linking 1 and 3 does not contain the sequence NP-S-NP or S-NP-S.

Notes For condition iii see 7.15.

Ordering: by the operation of the cycle follows AUX-AGREEMENT and AUX-PRO DELETION (7.14); otherwise precedes PRO-SUBJECT DELETION.

(18) PREDICATE EMPHASIS (optional, cyclic)

	NP	NP	Cop
SD:	1	2	3
SC:	2	3	1

Ordering: follows ADJECTIVE AGREEMENT, precedes COPULA AGREEMENT (3.9-10).

(19) DA-INSERTION (obligatory, cyclic)

	Det	N
	[+WH]	
SD:	1	2
SC:	1	Ø da
	[+REF]	

Condition i. 1 and 2 are dominated by Comp
 ii. not applicable where 1 is [+SPEC]

Notes A number of the stages which would be necessary for a full

derivation of the forms of the relative complementizer have been omitted, since further work is required on the structure of NP. This rule is intended to represent both -n/-r da and wanda etc. (the rule which shifts the referential suffix to the right of N nor being included in this list), but the non-restrictive cases in which no referential suffix appears are not accounted for.

(20) AUX-AGREEMENT (obligatory, cyclic)

	NP		Aux
	[
	FEM		
	Ø PLUR		
	NUMBER		
]		
SD:	1		2
SC:	1		2
		[
		Pro	
		FEM	
		Ø PLUR	
		NUMBER	
]	2

Ordering: by the operation of the cycle precedes FOCUS-RAISING (3.4) and RELATIVE DELETION (7.14); otherwise precedes PRO-SUBJ DELETION (7.14), CONJUNCT MOVEMENT (4.5) AUX-PRO DELETION (7.14)

(21) CONJUNCT MOVEMENT (optional, cyclic)

	NP	da	NP	X	#
SD:	1	2	3	4	5
SC:	1	4	2	3	5

Condition 4 contains no #

Ordering: follows AUX-AGREEMENT, PRECEDES COPULA AGREEMENT (4.5).

(22) COPULA AGREEMENT (obligatory, cyclic)

	NP [+FEM]	(NP)	Cop
SD:	1	2	3
SC:	1	2	3 [+FEM]

Ordering: precedes EXTRAPOSITION (4.1, 8.10), follows CONJUNCT MOVEMENT (4.5), RELATIVE FORMATION (3.10).

(23) EXTRAPOSITION (?optional, cyclic)

	N	S	X	#
SD:	1	2	3	4
SC:	1	3	2	4

Conditions i. N is Δ or has the rule-feature [+EXTRAPOSITION].
or ii. X contains a V [+EXTRAPOSITION].

Notes This is an attempt to collapse CLEFT and COMPLEMENT EXTRAPOSITION.

Ordering: by the operation of the the cycle precedes RELATIVE CLAUSE EXTRAPOSITION (4.8); otherwise follows it and AUX-AGREEMENT, precedes RELATIVE-CLAUSE EXTRAPOSITION and VERBAL SUFFIXING (4.1).

(24) COMP-DELETION (?last-cyclic)

I

	VP	X	#	Comp
SD:	1	2	3	4
SC:	1	2	3	\emptyset

Conditions i. 2 contains no #
ii. optional where 4 is [-DOUBT]
iii. obligatory where 4 is [+NP] and does not contain V

Ordering: precedes RELATIVE CLAUSE EXTRAPOSITION (4.2) and COPULA DELETION (8.3-10), follows EXTRAPOSITION.

II

	X	Comp [+WH]	NP [+WH]	Cop
SD:	1	2	3	4
SC:	1	∅	3	4

Condition obligatory where X is null, otherwise optional

Ordering: follows EXTRAPOSITION

Notes I collapses CLEFT and CEEWAA COMP DELETION; II handles KOO DELETION in special questions. Deletion of ceewaa and koo in highest S is not dealt with.

(25) GRAD ATTACHMENT (optional, cyclic)

	grad	X	NP	Y
SD:	1	2	3	4
SC:	∅	2	3 [1 3] 3	4

Notes This rule as formulated applies to grad on the higher (copular) S in focus-emphatics and follows FOCUS-RAISING, so that at this stage all foci are NP's.

Ordering follows FOCUS-RAISING, precedes COPULA DELETION (1.5)

(26) COPULA DELETION (?last-cyclic)

I

	NP	Cop	NP	Aux
SD:	1	2	3	4
SC:	1	∅	3	4

Conditions i. obligatory where 1 is grad+NP, otherwise optional
 either ii. 4 is [+REL]
 or iii. 1 is [+COP-DEL]

Ordering: follows EXTRAPOSITION (8.3-10).

II

	NP	na	NP	NP	Cop
SD:	1	2	3	4	5
SC:	1	2	3	4	∅

Condition 1 is [+COP-DEL]

III

	V	#	NP	Cop
SD:	1	2	3	4
SC:	1	2	3	∅

Condition 1 is [+R-T-S]

Ordering follows RAISING-TO-SUBJECT (q.v.)

Notes I covers focus-emphatic S and adverbial nouns of compulsion (8.10); for the cases covered by II and III see 8.9 a. and b.

(27) PRONOMINALIZATION (obligatory, cyclic)

	X	NP	Y	NP	Z
SD:	1	2	3	4	5
SC:	1	2	3	4	5

[+PRO]

Condition 2 = 4

Ordering: by the operation of the cycle precedes EQUI-NP DELETION (5.3) and NOMINALIZATION (5.4); otherwise follows EQUI-NP DELETION.

(28) DISLOCATION (optional, last-cyclic?)

I

	#	X	$\begin{Bmatrix} \text{NP} \\ \text{PP} \\ \text{VP} \end{Bmatrix}$	Y
SD:	1	2	3	4
SC:	1	3	2	3

II

	X	$\begin{Bmatrix} \text{NP} \\ \text{PP} \end{Bmatrix}$	Y	#
SD:	1	2	3	4
SC:	1	2	3	2

Notes I is "left" and II "right" DISLOCATION.

(29) PRO-SUBJECT DELETION (obligatory, last-cyclic)

	NP [+PRO]	Aux
SD:	1	2
SC:	∅	2

Ordering: follows AUX-AGREEMENT, PRONOMINALIZATION, RELATIVE DELETION; precedes AUX-PRO DELETION (7.14)

(30) AUX-PRO DELETION (~~obligatory~~ optional, cyclic)

	NP	Pro	Aux (+INDIC) -FUT -PERF
SD:	1	2	3
SC:	1	∅	3

Ordering: by the operation of the cycle precedes RELATIVE DELETION; otherwise follows AUX-AGREEMENT, RELATIVE DELETION and PRO-SUBJECT DELETION (7.14).

(31) WA-INSERTION (obligatory, cyclic)

	V	NP	NP
SD:	1	2	3
SC:	1 [1 wa] 1	2	3

Condition 1 is [+WA-INS]

Ordering: by the operation of the cycle precedes FOCUS-RAISING, and RELATIVE FORMATION; otherwise precedes PRONOUN CLITICIZATION.

(32) BAABU-REDUCTION (last-cyclic)

	báabũ	X
SD:	1	2
SC:	báa	2

Conditions i. obligatory where X is Aux
ii. optional where X is NP
iii. X is not null

(33) VERBAL SUFFIXING (obligatory, ?last-cyclic)

I

	V	(NP)	NP
	[+CAUS]		
SD:	1	2	3
SC:	1	2 da 3	

II

$$aa \Rightarrow a \quad \left/ \quad v \left[\begin{array}{c} V \\ [+G1] \end{array} \right] v \quad NP \right.$$

III

$$aa \Rightarrow i \quad \left/ \quad v \left[\begin{array}{c} V \\ [+G2] \end{array} \right] v \quad \begin{array}{c} NP \\ [-PRO] \end{array} \right.$$

IV

$$aa \Rightarrow ee \quad \left/ \quad v \left[\begin{array}{c} V \\ [+GE] \end{array} \right] v \quad \begin{array}{c} NP \\ [+PRO] \end{array} \right.$$

VI

$$wa \Rightarrow ma \quad \left/ \quad v \left[\begin{array}{c} V \\ \quad \quad \quad \end{array} \right] v \quad \begin{array}{c} NP \\ [+PRO] \end{array} \right.$$

VI

$$\left[\begin{array}{c} V \\ [+N] \\ [-STRONG] \end{array} \right] \Rightarrow \left[\begin{array}{c} V \quad vaa \\ [+FEM] \end{array} \right] v \quad \left/ \quad \text{---} \quad X \right.$$

Condition X is not NP

VII

$$\left[\begin{array}{c} V \\ [+N] \\ [+STRONG] \end{array} \right] \Rightarrow v \left[\begin{array}{c} V \quad n \end{array} \right] v \quad \left/ \quad \text{---} \quad NP \right.$$

Notes These are only some of the morphological rules needed to account for the form of V; they are therefore set out here not in strict order.

I refers to the causative (Grade 7); II Grade 1; III and IV Grade 2; V the "dative" particle; VI "weak" and VII "strong" verbal nouns.

Ordering: all follow FOCUS-RAISING; RELATIVE DELETION and EXTRAPOSITION (4.1).

(34) LINK AGREEMENT (obligatory)

	NP	n(a)
	[+FEM]	
SD:	1	2
SC:	1	t(a)

Ordering: precedes RELATIVE CLAUSE EXTRAPOSITION (to account for the agreement of extraposed genitives).

(35) RELATIVE CLAUSE EXTRAPOSITION (optional, cyclic)

	NP	S	X
SD:	1	2	3
SC:	1	3	2

Condition 3 does not contain NP or VP

Notes A solution to the problem posed in 4.8 about the surface order of extraposed relative clauses optionally to the left of cleft clauses and conjuncts is provided by the condition already attached to this rule: the relative clause may cross the variable only if it does not contain NP or VP, which the latter do.

(36) RIGHT SHUFFLE (optional)

	VP	X	Y	#
SD:	1	2	3	4
SC:	1	3	2	4

Notes This rule does not account for sentences of the form NP baa NP ba nce.

(37) GENITIVE LINK CLITICIZATION (obligatory)

	N	{na}	NP
		{ta}	
SD:	1	2	3
SC:	1	[_n t] ₁	ø 3

Notes Not obligatory in some dialects.

(38) PRONOUN CLITICIZATION (obligatory, last-cyclic)

$$\left\{ \begin{array}{l} V \\ N \left\{ \begin{array}{l} n(a) \\ t(a) \end{array} \right\} \end{array} \right\} \left[\begin{array}{l} NP \\ +PRO \\ \alpha FEM \\ \beta PLUR \\ \gamma NUMBER \end{array} \right]$$

SD: 1 2

SC: $\left[\begin{array}{l} 1 \text{ Pro} \\ \alpha FEM \\ \beta PLUR \\ \gamma NUMBER \end{array} \right] 1 \quad \emptyset$

(39) MOD DISTRIBUTION (last-cyclic)

mod X Y

SD: 1 2 3

SC: 2 1 3

Condition obligatory except where mod is kumaa

Ordering follows at least some VERBAL SUFFIXING rules since it is possible to say naa san dai haka "I know mod that" where san is an NP-object form; also follows PRONOUN CLITICIZATION, since *naa san dai shii "I know mod him" is ungrammatical.

(40) A-DELETION (?last-cyclic)

X a NP

SD: 1 2 3

SC: 1 \emptyset 3Condition obligatory where X is V [+MOTION] or naa, otherwise optional.

Ordering follows VERBAL SUFFIXING (3.8) and COPULA AGREEMENT in the dialect studied (3.8).

List of Works referred to

Abbreviations MSE - "Modern Studies in English: Readings in Transformational Grammar" - D.A. Reibel, and S.A. Schane eds. Prentice Hall; RETG - "Readings in English Transformational Grammar" R.A. Jacobs and P.S. Rosenbaum, Ginn & Co. the publication of N.B. The date quoted for all published works is that of the source which I used, not of its first appearance.

- Almajian, A. (1971) "On Deriving Cleft Sentences from Pseudo-cleft sentences" Linguistic Inquiry
- Arnett, D.W. (1970) "The Nominal and Verbal Systems of Fula" O.U.P.
- Awobuluyi, O. (1971) "On the Status of Prepositions" Journal of West African Languages
- " (1972?) "On the Nature of Relative Clauses" unpublished.
- Bagari, D.M. (1970) "Some Aspects of Nominalizations in Hausa" M.Phil. thesis, University of London.
- " (1972) "NP Complementation in Hausa" African Language Studies
- Baker, G.L. (1968) "Indirect Questions in English" Ph.D. thesis University of Illinois.
- Bresnan, J. (1970) "On Complementizers: toward a syntactic theory of Complement types" Foundations of Language
- " (1971) "Sentence Stress and Syntactic Transformations" Language
- Chapin, P.G. (1970) "Samoan Pronominalization" Language
- Chomsky, N. (1965) "Aspects of the Theory of Syntax" MIT
- " (1970) "Remarks on Nominalization" in RETG
- " (1972) "Deep Structure, Surface Structure and Semantic Interpretation" in "Studies on Semantics in Generative Grammar" Mouton
- Emonds, J. (1969) "Root and Structure -preserving Transformations" Ph.D. thesis MIT
- Eulenberg, J. (1971) "A New Look At The Hausa Predicating Particles" Studies in African Linguistics
- Faraci, R.A. (1971) "On the Deep Question of Pseudo-clefts" English Linguistics

- Galadanci, M.K. (1969) "The Simple Nominal Phrase in Hausa"
Ph. D. thesis, University of London
- Gouffé, C. (1962) "Observations sur le degré causatif dans
un parler Haoussa du Niger" Journal of
African Languages
- Gregersen, E.A. (1967) "Some competing Analyses of Hausa" Journal
of African Languages
- Halliday, M.A.K. (1967) "Transitivity and Theme in English" Journal
of Linguistics
- Jackendoff, R. (1969a) "Some rules of Semantic Interpretation
for English" Ph.D. thesis MIT
- " (1969b) "An interpretive theory of Negation"
Foundations of Language
- Keenan, E. (1972) "On Semantically Based Grammar" Linguistic
Inquiry
- King, R. (1969) "Historical Linguistics and Generative
Grammar" Prentice Hall.
- Kuroda, S.-Y. (1969) "Attachment Transformations" in MSE
- Lakoff, G. (1970) "Irregularity in Syntax" Holt, Rinehart, Winston
- Langacker, R.W. (1969a) "On Pronominalization and the Chain of
Command" in MSE
- " (1969b) "Mirror-image rules I: syntax" Language
- Newman, P. (1971) "The Hausa Negative Markers"
Studies in African Linguistics
- Parsons, P.W. (1960) "The Verbal System in Hausa" Afrika und
Übersee
- " (1964) "The Operation of Gender in Hausa: Stabilizer,
Dependent Nominals and Qualifiers"
African Language Studies
- Perlmutter, D.M. (1972) "Deep and Surface Constraints in Syntax"
Holt, Rinehart, Winston.
- Postal, P.M. (1969) "On So-called 'Pronouns' in English" in MSE
(1971) "Socsover Phenomena" Holt, Rinehart, Winston.
- Rosenbaum, P.S. (1967) "The Grammar of English Predicate Complement
Constructions" MIT

- Ross, J.R. (1967) "Constraints on Variables in Syntax" Ph.D. thesis MIT
- " (1969a) "On the Cyclic Nature of English Pronominalization" in MSE
- (1969b) "A Proposed Rule of Tree-pruning" in MSE
- (1970) "On Declarative Sentences" in BEFG
- (1971) "Act" in "Semantics of Natural Language" eds. D. Davidson and G. Harman
- Schachter, P. (1966) "A generative account of Hausa ~~NP/CP~~ NP/CP" Journal of African Languages
- Welmers, W. (1964) "The Syntax of Emphasis in Kpelle" Journal of West African Languages
- Wilson, D. (1972) "Presuppositions on Factives" Linguistic Inquiry